# AUDIO/VIDEO MULTI-CHANNEL RECEIVER

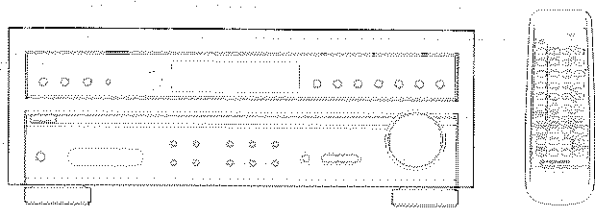
# RECEPTOR MULTICANAL DE AUDIO Y VÍDEO

# 視聽多重頻道接收器

Operating Instructions

Manual de instrucciones

操作說明書



## VSX-D457

PIONEER

*The Art of Entertainment*

Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However the method of connecting and operating the unit is the same.

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

THE POWER SWITCH IS SECONDARY CONNECTED AND THEREFORE DOES NOT SEPARATE THE UNIT FROM MAINS POWER IN STANDBY POSITION.

## VENTILATION

- When installing this unit, make sure to leave space around the unit for ventilation to improve heat radiation ( at least 60 cm at top, 10 cm at rear, and 30 cm at each side). If not enough space is provided between the unit and walls or other equipment , heat will build up inside, interfering with performance or causing malfunctions.
- Do not place on a thick carpet, bed, sofa or fabric having a thick pile. Do not cover with fabric or other covering.
  Anything that blocks ventilation will cause internal temperature to rise, which may lead to breakdown or fire hazard.

*Manufactured under license from the Dolby Laboratories Licensing Corporation. "DOLBY", the double-D symbol ⊡⊡ and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.*

*The words "TRUSURROUND", "SRS", "Sound Retrieval System" and SRS symbol (●) are trademarks of SRS Labs, Inc. Made under license from SRS Labs, Inc. Patented in the USA and selected countries. Purchase of this product does not convey the right to sell recordings made with the Sound Retrieval System.*

# IMPORTANT

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.

– Increase the separation between the equipment and receiver.

– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

– Consult the dealer or an experienced radio/TV technician for help.

**Information to User**
Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

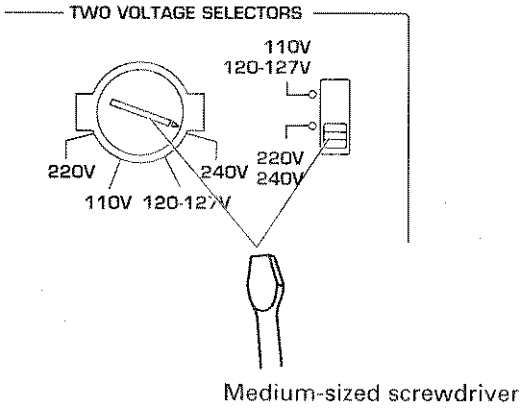

ARE7164-
EN

## TWO VOLTAGE SELECTOR SWITCHES

**Mains voltages in Saudi Arabia are 127 V and 220 V only. Never use this model with the 110 V setting in Saudi Arabia.**

The line voltage selector switches are on the rear panel. Check that they are set properly before plugging the power cord into the household wall socket. If the voltage is not properly set or if you move to an area here the voltage requirements differ, adjust the selector switches as follows.

1. Use a medium-sized screwdriver.
2. First, insert the screwdriver in the groove of the voltage selector at the left, and adjust so that the tip of the groove points to the voltage value of your area.
3. Next, insert the screwdriver in the groove of the voltage selector at the right and adjust until the voltage is the same as at the left.




## CHANNEL STEP SETTING

The unit has been factory preset to the channel allocation value for the area in which it is to be sold. If this value is set incorrectly, the tunes in frequency may be wrong, or sound may be distorted, resulting in an inability to reproduce reception signals at their proper sound quality. For this reason, be sure to confirm that the values are set correctly before first using the unit.

### FM 100 kHz, AM 10 kHz:

Set to this position for areas with an FM reception step of 100 kHz and AM 10 kHz.

### FM 50 kHz, AM 9 kHz:

Set to this position, for areas with an FM reception step of 50 kHz and AM 9 kHz.

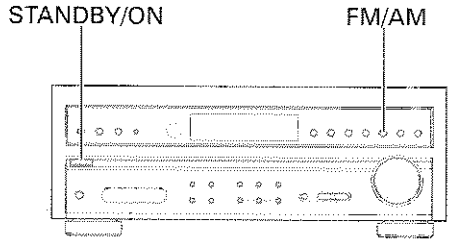
***NOTE:***

*When unsure about the channel allocation for your area, consult your dealer for correct information.*

### To Change Channel Steps

With the power turned OFF, hold the FM/AM function button depressed while pressing the STANDBY/ON button to turn the power ON.

- Each time the above operation is performed, the channel tuning step will alternate between FM 100 kHz/AM 10 kHz, and FM 50 kHz/AM 9 kHz.



# FEATURES

## □ DOLBY PRO LOGIC COMPATIBLE

Best suited for playing back movies and music by reproducing surround effects.

## □ 100 W 5 ch EQUAL POWER AMPLIFIER

5 ch equal power amplifier which plays back the high quality effect of Dolby Pro Logic.

## □ VARIOUS SURROUND EFFECTS (DSP)

Reproduces six different surround effects.

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## □ VIRTUAL DOLBY SURROUND

The Virtual Dolby Surround function employs TruSurround* technology to create a three-dimensional sound field using only the front right and left speakers.

* Registered in the US and selected foreign countries.

## □ 5.1-CHANNEL INPUT

Features input terminals for center, surround L, R, and sub-woofer (LFE) channels, thus allowing the connection of Dolby Digital decoder or DVD player provided with 5.1-channel output.

## □ 5-D THEATER

The 5-D THEATER function provides clear dynamic sound effects by outputting audio signals through the surround channel to simulate stereo sound.

## 4. OPERATIONS


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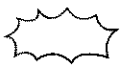
## ■ Meaning of Marks

Provides detailed precautions and advice on operations, etc.

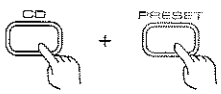


Indicates that displays are blinking.

Indicates that displays are lit.

## ■ Meaning of Illustrations

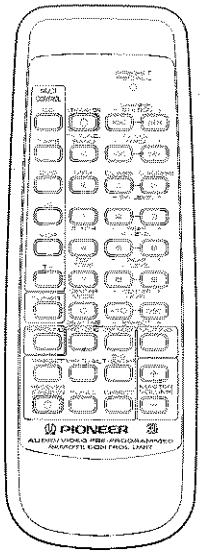
Means to press the CLASS button.




Means to press the CD button (of the remote control unit) while pressing the PRESET button (of the remote control unit).

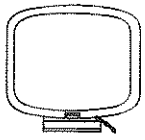
Means to press the MASTER VOLUME + or MASTER VOLUME – button (of the remote control unit).

## CHECKING ACCESSORIES

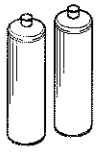


Remote control unit

FM antenna



AM loop antenna



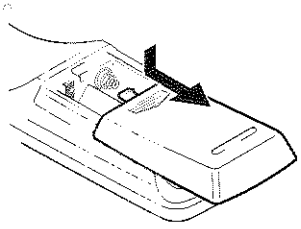
Dry cell battery
(size "AA" IEC R6P) × 2

Operating instructions

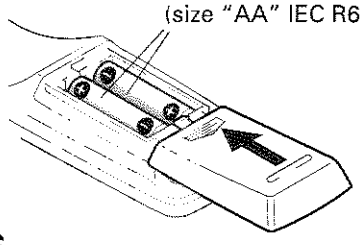
## REMOTE CONTROL UNIT

### Loading remote control batteries

1.



2.



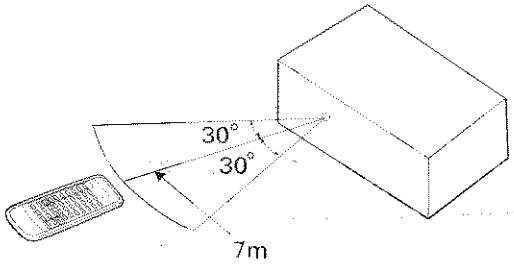
Dry cell battery
(size "AA" IEC R6P) × 2

### CAUTIONS

**Incorrect use of batteries may result in such hazards as leakage and bursting. Observe the following precautions.**

- Never use new and old batteries together.
- Insert the plus and minus sides of the batteries properly according to the marks in the battery compartment.
- Batteries with the same shape may have different voltages. Do not use different voltage batteries together.

### Operating range of remote control unit

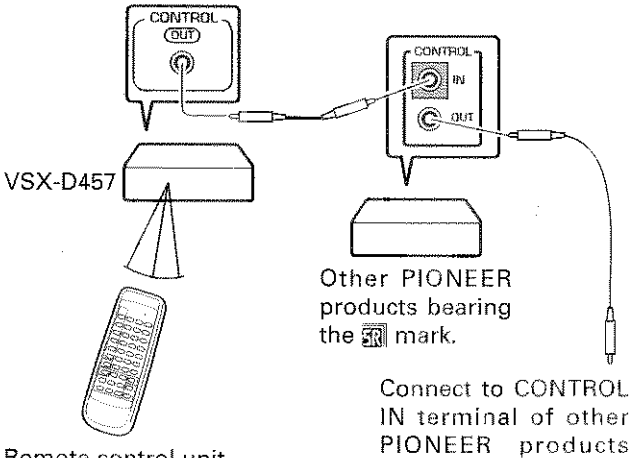



Memo

- The remote control unit may not work if there are obstacles between the remote control unit and this unit, or if the remote control unit is not directed towards the remote sensor of the main unit at the correct angle.
- The remote control unit may not work properly if strong light such as direct sunlight or fluorescent light is shining onto the main unit's remote sensor.
- The remote control unit may not work properly when this unit is used near devices emitting infrared rays, or when remote control units of other devices which use infrared rays are used.
  On the other hand, the use of this remote control unit may cause other devices to work improperly.
- When the operating range of this remote control unit becomes too short, replace the batteries.

### Operating the remote control unit

By connecting a control cord (optional), other PIONEER products can be operated using this remote control unit. Point the remote control unit towards the remote sensor of this unit and operate.
The remote control signals are received by the remote sensor of this unit, and sent to the other devices via the CONTROL OUT terminal.

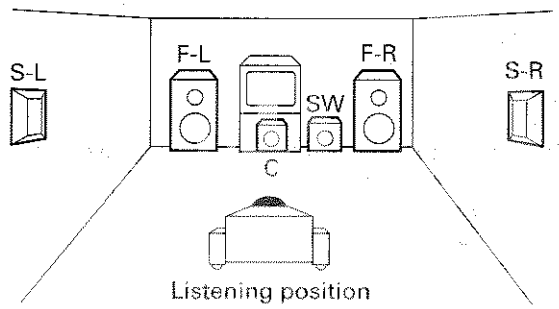


# INSTALLATION

## Installing speakers

To achieve the best surround effects, install speakers as shown in the following figure.

### Installation Example




In the above figure, F stands for front speakers, S for surround speakers, C for center speaker, SW for sub woofer, R for right, and L for left.

Memo

- If installing the surround speakers far away from the front and center speakers, surround effects cannot be fully achieved.
- Installing speakers near the TV may cause interference such as the TV color to change. In such cases, use magnetically shielded speakers or install the speakers away from the TV.
- Install the left and right speakers at equal distance from the TV.
- Install the center speaker at the top, bottom, or behind the TV so that TV sound and images match.
- It is recommended to install the surround speakers slightly above ear level.

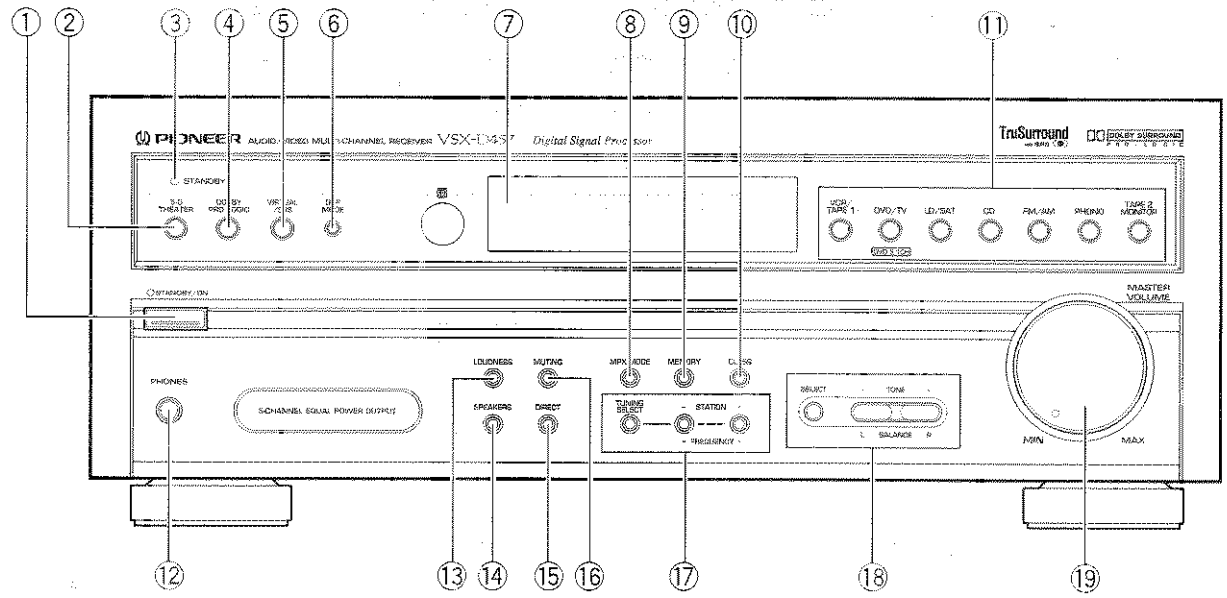
## Installing a cassette deck

The cassette deck may produce noise when played back depending on the place of installation.
The noise is due to the effects of leakage flux caused by the transformer of the receiver.
In such cases, change the place of installation or install it away from the receiver.

## NAMES OF PARTS

### Front panel

- The size of characters in the figure may different from that on the actual product.




① **⏻ (power) STANDBY/ON button**

② **5-D THEATER button (P. 19)**

③ **STANDBY indicator**

④ **DOLBY PRO-LOGIC button (P. 16)**

⑤ **VIRTUAL/SRS button (P. 20)**

⑥ **DSP MODE button (P. 18)**

⑦ **Display**

⑧ **MPX MODE button**

Use to switch the auto stereo/monaural mode for receiving FM broadcasts.
When the received broadcast signal is weak, press this button to set the monaural mode.

⑨ **MEMORY button (P. 23, 24)**

⑩ **CLASS button (P. 23)**

⑪ **Function buttons (P. 22, 24, 25, 26, 27)**

⑫ **PHONES jack (Headphone terminal)**

⑬ **LOUDNESS button**

Press this button when the volume is low to raise the low and high range levels so that the sound can be heard more easily.

⑭ **SPEAKERS button**

Use to switch the A and B speaker systems.

⑮ **DIRECT button**

Use to play back sound without going through the tone and balance control circuits. DOLBY PRO LOGIC, DSP MODE, 5-D THEATER, DOLBY VIRTUAL/SRS and LOUDNESS also turn off.

⑯ **MUTING button**

Press to mute the volume.

⑰ **TUNING SELECT, STATION (–, +) and FREQUENCY (–, +) buttons (P. 22, 23, 24)**

**TUNING SELECT:**
Use to select the STATION mode and FREQUENCY mode when operating the tuner.
**STATION (–, +):**
Use to select the station number when operating the tuner.
**FREQUENCY (–, +):**
Use to select the frequency when operating the tuner.

⑱ **SELECT, TONE (–, +) and BALANCE (L, R) buttons**

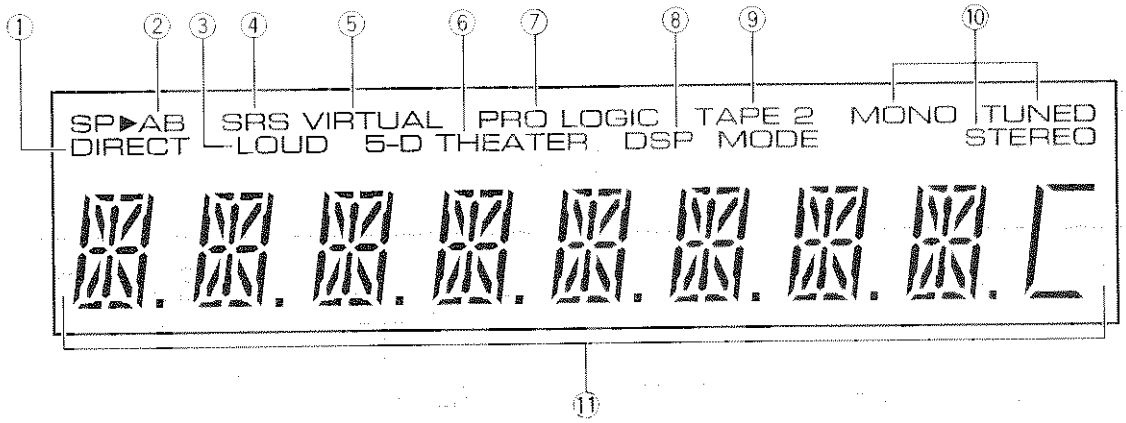
**SELECT:**
Use to select the TONE (TREBLE, BASS) and BALANCE control.

TREBLE control → BASS control → BALANCE control

**TONE (–, +):**
Use to adjust tone.
**BALANCE (L, R):**
Use to adjust volume balance.

⑲ **MASTER VOLUME**

## Display




① **DIRECT indicator**
Lights when DIRECT is ON.

② **SP (Speaker) A, B indicator**
The indicator of the speaker system (A, B) selected will light.

③ **LOUD (Loudness) indicator**
Lights when LOUDNESS is ON.

④ **SRS indicator**
Lights when SRS 1 or SRS 2 (one of the virtual surround mode) is selected.

⑤ **VIRTUAL indicator**
Lights when DOLBY VIRTUAL is selected.

⑥ **5-D THEATER indicator**
Lights in the 5-D THEATER mode.

⑦ **PRO LOGIC indicator**
Lights when Dolby Pro Logic is selected.

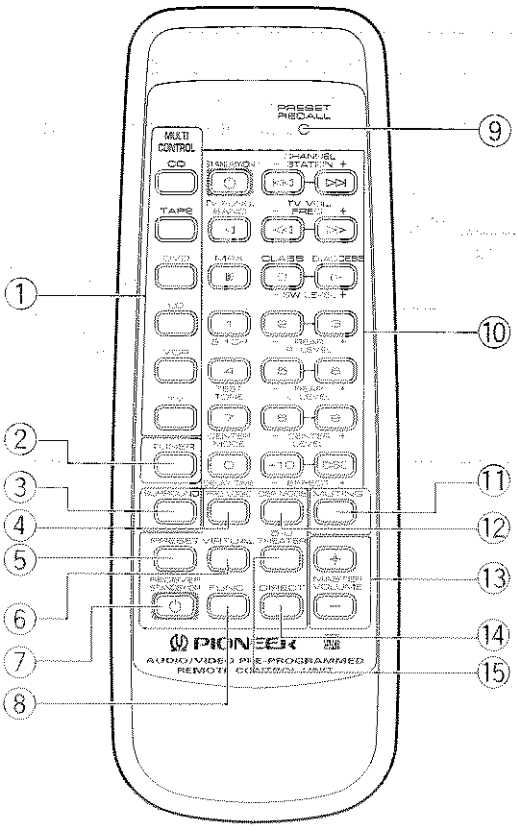
⑧ **DSP MODE indicator**
Lights when DSP MODE is selected.

⑨ **TAPE 2 indicator**
Lights when TAPE 2 MONITOR is ON.

⑩ **TUNER indicator**
**MONO:**
Lights when the monaural mode is set using the MPX MODE button.
**STEREO:**
Lights when stereo broadcasts are received during auto stereo mode.
**TUNED:**
Lights when broadcasts are being received.

⑪ **CHARACTER display**

## Remote control unit




① **MULTI CONTROL function buttons (P. 28, 30 to 34)**
Use to set and operate the MULTI CONTROL.

② **TUNER button (P. 21, 22, 24)**
Use to set the TUNER function.

③ **SURROUND button (P. 15, 17, 19, 25)**
Press when performing surround operations.

④ **PRO LOGIC button (P. 15)**
Use to turn ON/OFF the DOLBY PRO LOGIC surround.

⑤ **PRESET button (P. 28, 29)**
To preset other brand devices, press any one of the MULTI CONTROL function buttons together with this button.

⑥ **VIRTUAL button (P. 20)**
Use to switch the VIRTUAL/SRS mode.

⑦ **RECEIVER ⏻ (power) STANDBY/ON button**
Use to switch the RECEIVER power to ON or STANDBY.

⑧ **FUNC. button (P. 21, 22, 24 to 27)**
Switches the function.

⑨ **PRESET RECALL indicator (P. 28, 29)**

⑩ **[Tuner Operations]**
⏻ (power) STANDBY/ON, STATION –/+, BAND, FREQ –/+, MPX, CLASS, D.ACCESS and number buttons
**[TV Operations]**
⏻ (power) STANDBY/ON, CHANNEL –/+, TV FUNC., TV VOL. –/+ and number buttons
**[CD Operations]**
⏻ (power) STANDBY/ON, ⏮, ⏭, ◀◀, ▶▶, ⏸, ■, ▶, DISC, +10 and number buttons
**[CASSETTE DECK Operations]**
⏻ (power) STANDBY/ON, ◀, ◀◀, ▶▶, ⏸, ■ and ▶ buttons
**[DVD and LD Operations]**
⏻ (power) STANDBY/ON, ⏮, ⏭, ◀◀, ▶▶, ⏸, ■, ▶, DISC, +10 and number buttons
**[VCR Operations]**
⏻ (power) STANDBY/ON, CHANNEL –/+, ◀◀, ▶▶, ⏸, ■ and ▶ buttons
**[When setting surround (operations)]**
**5.1 CH**: Use to turn ON/OFF the 5.1 CH INPUT mode.
**TEST TONE**: When turned ON (while in surround mode), volume balance adjustment signals are output in order from the speakers and can be adjusted.
**CENTER MODE**: Switches the center mode (only when setting the Dolby Pro Logic).
**DELAY TIME**: Use to set the delay time (only when setting the Dolby Pro Logic).
**SW LEVEL –/+**: Adjusts the sub woofer level.
**REAR R. LEVEL –/+**: Adjusts the rear level (R channel).
**REAR L. LEVEL –/+**: Adjusts the rear level (L channel).
**CENTER LEVEL –/+**: Adjusts the center level.
**EFFECT –/+**: Adjusts DSP effects.

⑪ **MUTING button**
Press to mute the volume.

⑫ **DSP MODE button (P. 17)**
Switches the surround effects.

⑬ **MASTER VOLUME –/+ buttons**
Use to adjust the volume.

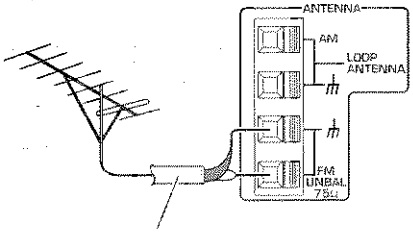
⑭ **DIRECT button**
Use to play back sound without going through the tone and balance control circuits. DOLBY PRO LOGIC, DSP MODE, 5-D THEATER, DOLBY VIRTUAL/SRS and LOUDNESS also turn off.

⑮ **5-D THEATER button (P. 19)**
Use to turn ON/OFF the 5-D THEATER mode.

# CONNECTING DEVICES

When connecting or changing equipment, be sure to turn OFF the POWER switch, and disconnect the power cord from the wall outlet.

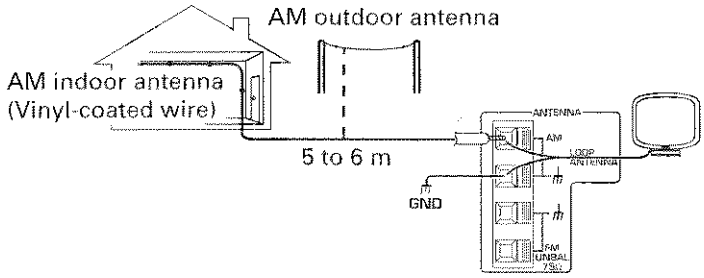
## ■ For better reception of signals, use an FM external antenna.



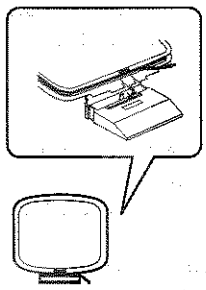

75 Ω coaxial cable

## ■ When AM broadcast reception is poor

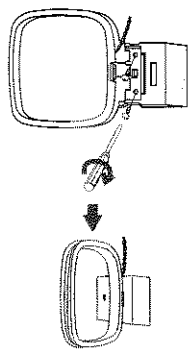
Connect a 5 to 6 meter long vinyl-coated wire to the AM antenna. If possible, draw horizontally outdoors to achieve better reception.



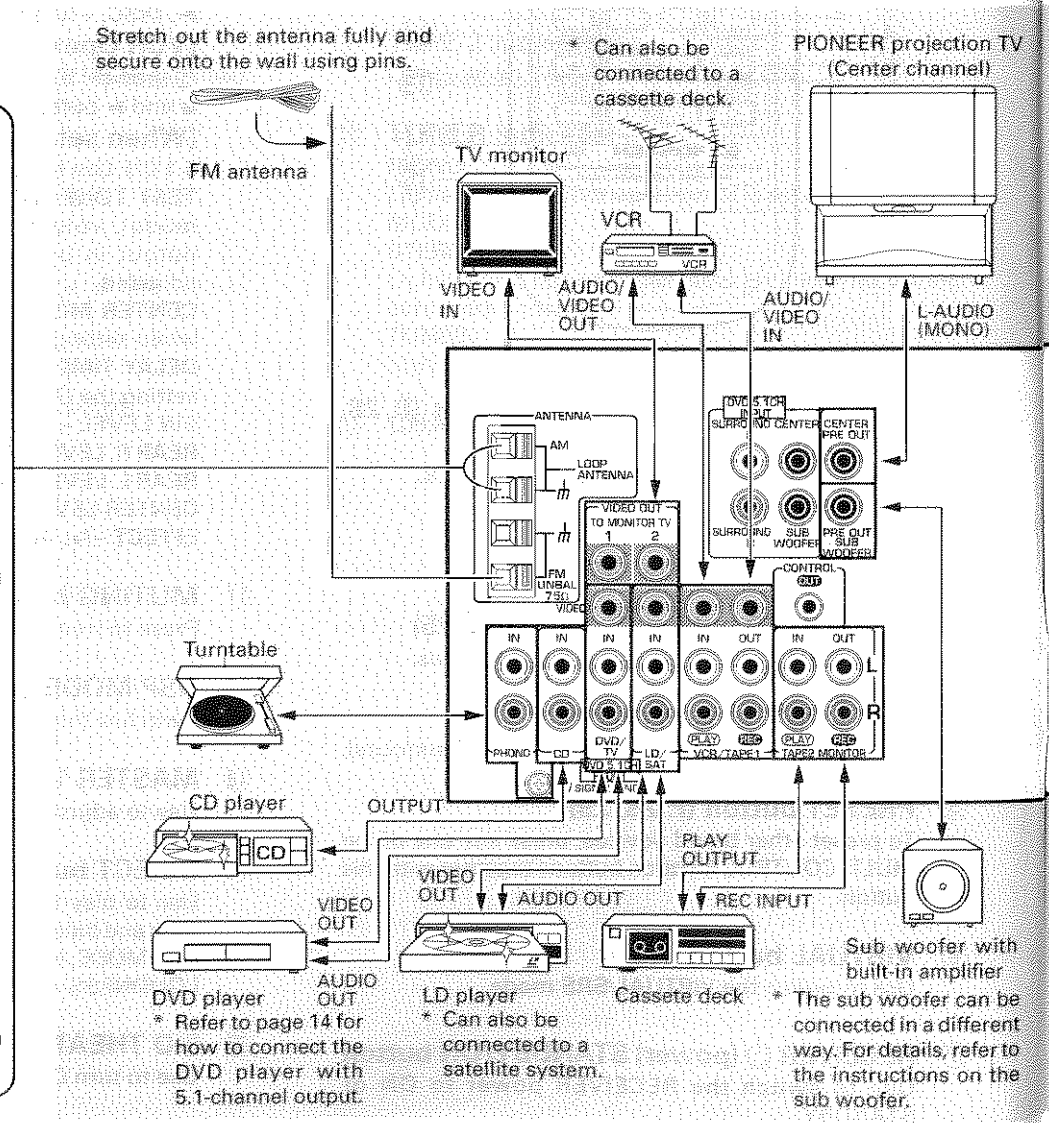

## ■ Assembling the AM loop antenna



## ■ When attached onto a wall, etc.

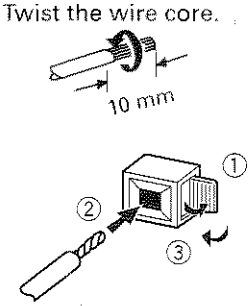


Face towards the direction with the best reception.



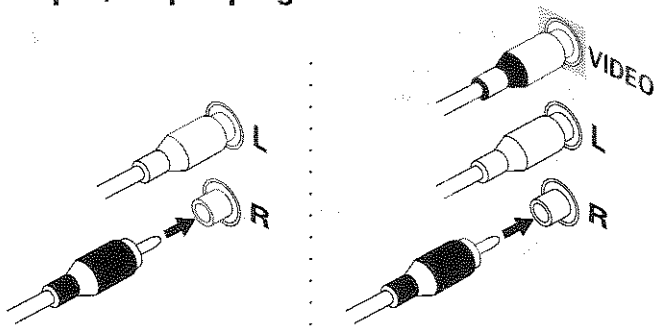
## ■ Antenna terminal

Twist the wire core.




While pressing lever ①, insert the antenna wire ② into the connector hole, then release the lever ①.

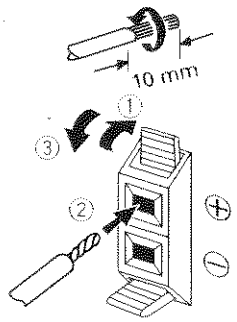
## ■ Input/output plug



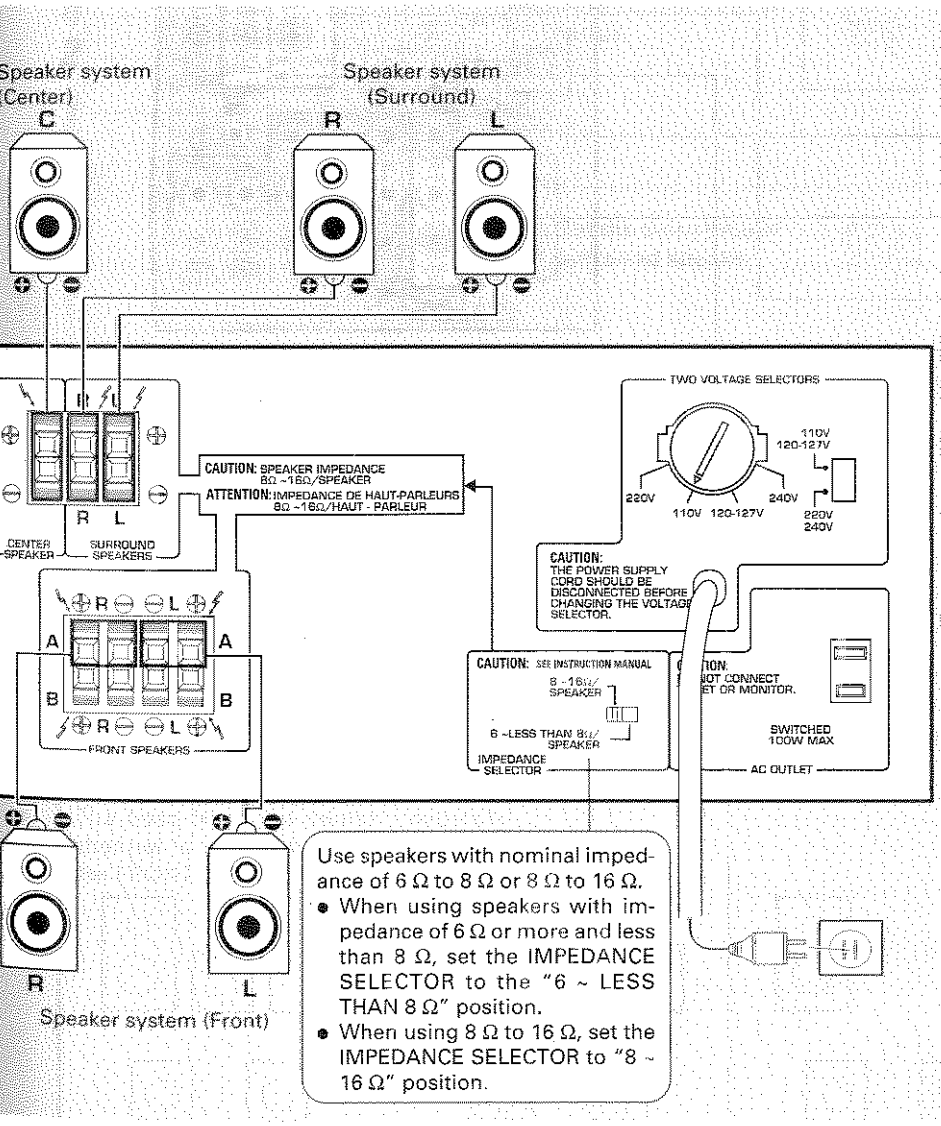

Connect the white plug to L, red plug to R, and yellow plug to VIDEO. Be sure to insert completely.

## ■ Speaker terminal

Twist the wire core.




- The size of characters and terminal positions in the figures may differ from those on the actual product.




Use speakers with nominal impedance of 6 Ω to 8 Ω or 8 Ω to 16 Ω.

- When using speakers with impedance of 6 Ω or more and less than 8 Ω, set the IMPEDANCE SELECTOR to the "6 ~ LESS THAN 8 Ω" position.
- When using 8 Ω to 16 Ω, set the IMPEDANCE SELECTOR to "8 ~ 16 Ω" position.

## AC OUTLET

### [SWITCHED 100 W MAX]

Power supplied through this outlet is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W.

Memo

- This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g., when on vacation.
- Do not connect appliances with high power consumption such as heaters, irons, or television sets to this AC OUTLET in order to avoid overheating and fire risk. This can also cause the receiver to malfunction.

**CAUTION:**
**DO NOT CONNECT A MONITOR OR TV SET TO THIS UNIT'S AC OUTLET.**

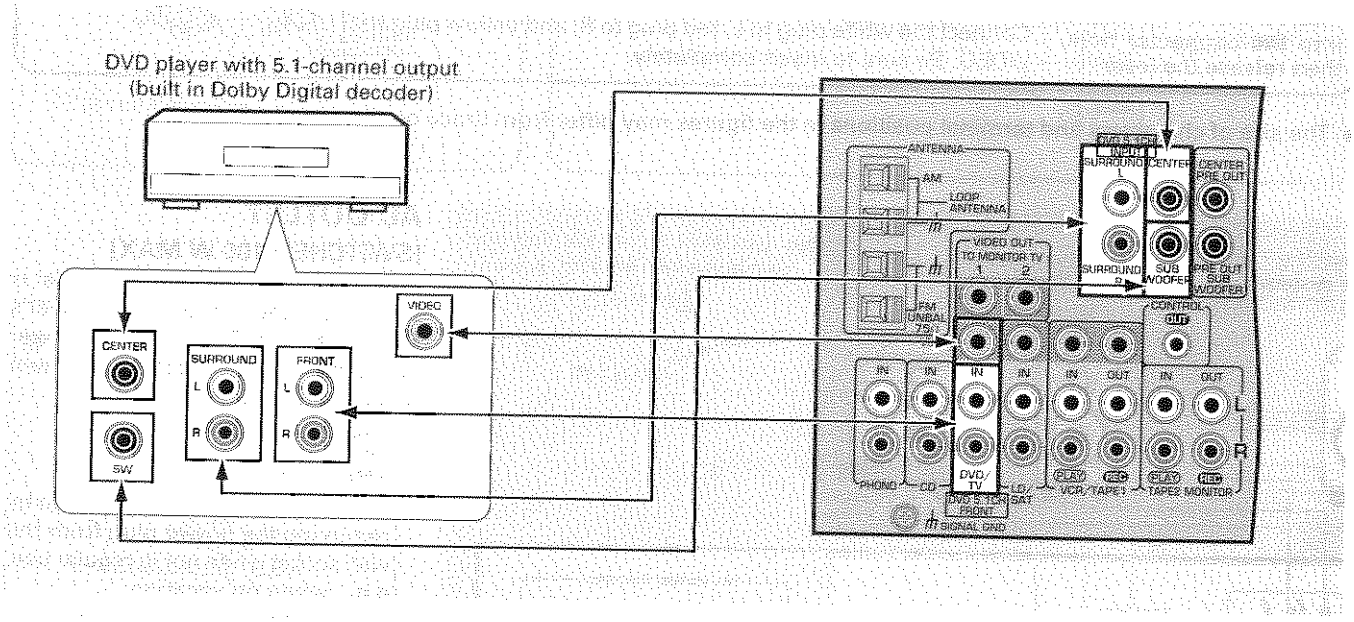
## DVD 5.1-channel input terminals

When using DVD/TV functions, the unit supports both 2-channel and 5.1-channel input (refer to page 25, "DVD 5.1-CHANNEL INPUT MODE"). When the 5.1-channel mode is selected, SURROUND L, R, CENTER, and SUB WOOFER terminals are enabled, thus allowing the connection of a Dolby Digital decoder or DVD player with 5.1-channel output.

Memo

5.1-channel inputs are supported only during use of the DVD/TV function.
Other functions cannot be used with 5.1-channel input.

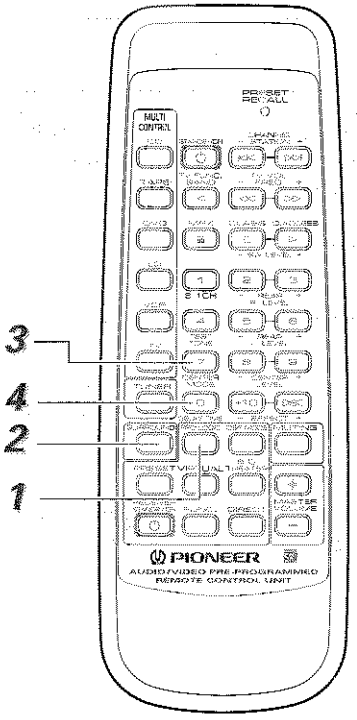
### [Connection Example]



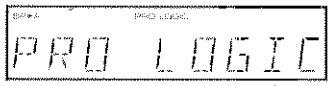
## ENJOYING SURROUND EFFECTS

**To enable surround operation, press the SURROUND button after selecting the function.**

### Switching the Dolby Pro Logic Surround



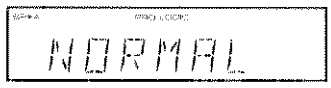

**1. Switch the Dolby Pro Logic.**




Each time it is pressed, the mode is turned ON/OFF.

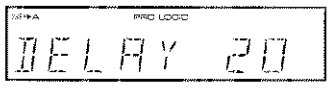
**2. Set the SURROUND operation.**

**3. Select the center mode.**




NORMAL → WIDE → PHANTOM → 3CH LOGIC → NORMAL

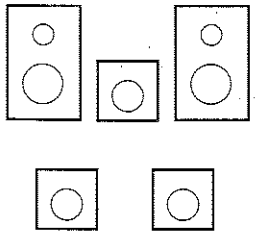
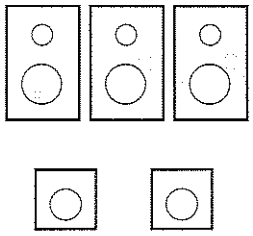
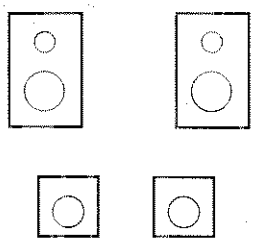
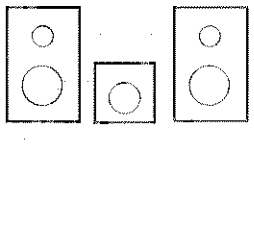
**4. Set the delay time of surround speaker.**

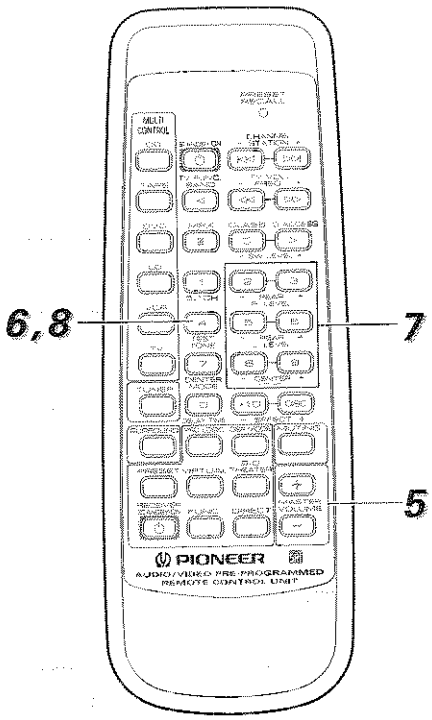



15 ms → 20 ms → 25 ms → 30ms → 15 ms

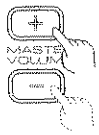
- The delay time is set so as to provide virtual equalization of the distance between the listening position and the surround speakers, and the distance between the listening position and the front speakers.
- When 3CH LOGIC is selected in the center mode, the delay time cannot be set.
- Initially, it is set to 20 ms.

### ■ Center mode and 3ch LOGIC

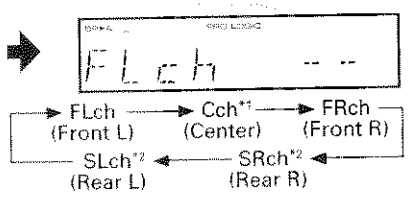
| NORMAL | WIDE | PHANTOM | 3ch LOGIC |
|---|---|---|---|
| Plays back middle and high range sounds from the CENTER speaker. Sounds are at the fixed position. The bass from the center channel is played back by the FRONT speakers. | Using the same speakers as the FRONT speakers for the CENTER speaker enables sounds from bass to treble to be played back more naturally. | The center channel sounds are played back between the L and R FRONT speakers. | The surround channel sounds and center channel bass sounds are played back between the L and R FRONT speakers. |
|  |  |  |  |




**5.** **Adjust to the desired volume.**

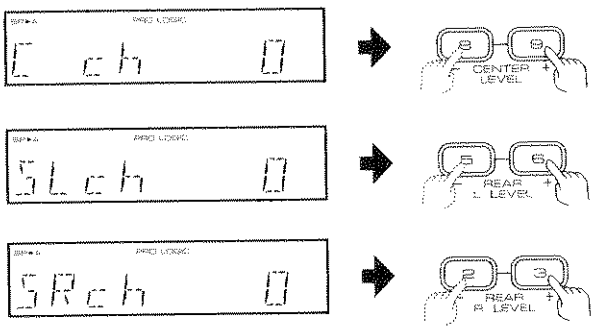



**6.** **Set the test tone.**




**7.** **Adjust the center level, rear L level and rear R level so that the test tone volume output from each speaker is the same.**

- The level adjustment of front L, front R and sub woofer cannot be performed during test tone output.




**8.** **Turn OFF the test tone.**

**9.** **Play the desired source.**

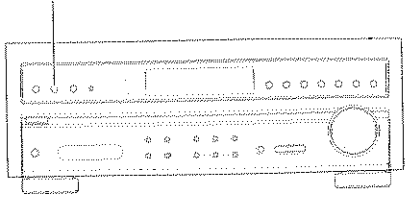
Memo

*1 When selecting PHANTOM in the center mode, no test tone is output from the center speaker.
*2 When 3CH LOGIC is selected in the center mode, no test tone from the surround speaker is output.

- When PRO LOGIC is selected, the VIRTUAL/SRS and DIRECT modes are automatically switched off.
- Perform the level adjustment of sub woofer with listening to the played back source sound.

## ■ Operating with the main unit

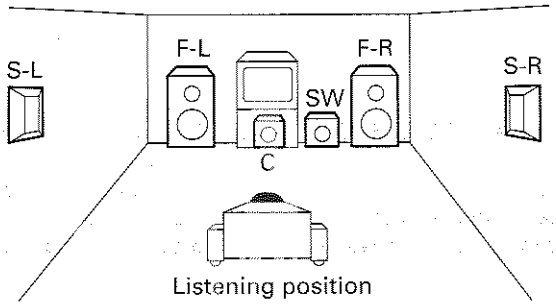
DOLBY PRO LOGIC



**Press the DOLBY PRO LOGIC button.**
Dolby Pro Logic is turned ON/OFF each time it is pressed.

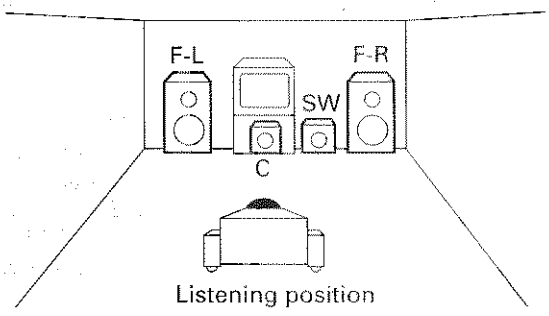
## Dolby Pro Logic Surround

Set to this position for video and music sources (especially sources bearing the DOLBY SURROUND marks).
Dolby Pro Logic Surround continuously detects the size and direction of signals.
As a result, the position of the sound source becomes clear, enabling reproduction of natural sound flow.




## Dolby 3ch Logic

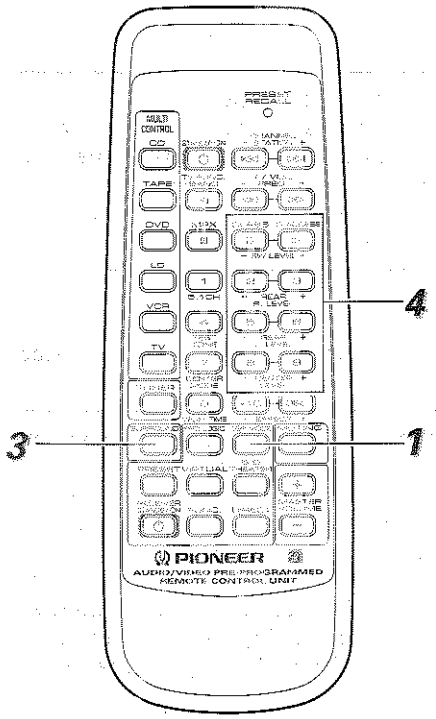
Same system as the Dolby Pro Logic Surround except that SURROUND speakers are not installed. SURROUND speaker signals are played back by the FRONT speakers, enabling better reproduction of surround effects and depth than with normal stereo playback.



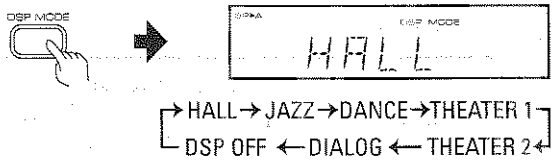

* In the above figure, F stands for front speakers, S for surround speakers, C for center speaker, SW for sub woofer, R for right, and L for left.

**To enable surround operation, press the SURROUND button after selecting the function.**

## Switching the sound effects (DSP MODE)

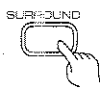



**1. Select the sound effects.**

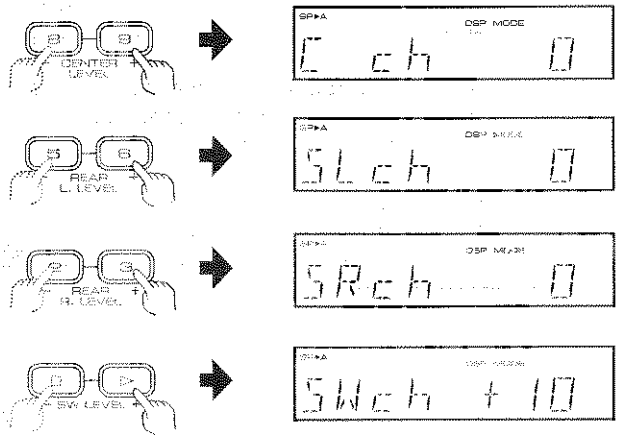


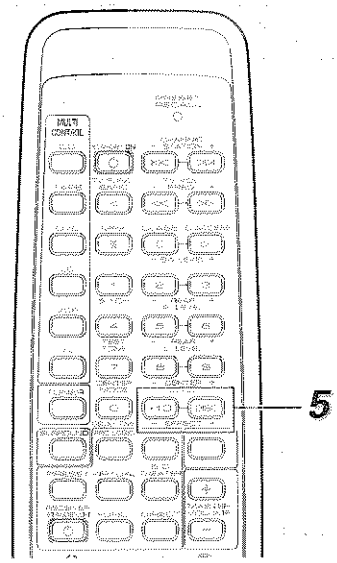

**2. Play back the source.**

**3. Set the SURROUND operation.**

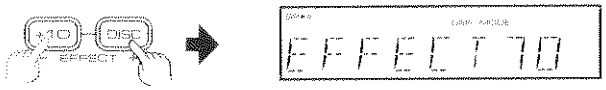



**4. Adjust the center level, rear L level, rear R level and sub woofer level.**





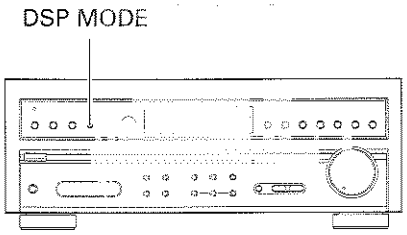

**5. Adjust the effect level.**




Adjust the sound reflection level (can be set within the range 10-90); higher settings will produce the sound-field effects of a room with high reflective properties.
Effect level cannot be adjusted when DIALOG is selected in the DSP mode.

Memo

- When DSP mode is selected, the VIRTUAL/SRS, 5-D THEATER and DIRECT modes are automatically switched off.
- Each channel level and effect level settings are memorized for each DSP mode.
- The DSP mode can be used together with the Dolby Pro Logic mode. In this case, the channel levels employed are those set for the Dolby Pro Logic mode.




## ■ Operating with the main unit

**Press the DSP MODE button.**
Each time it is pressed, the surround effects change as follows.

→HALL→JAZZ→DANCE→THEATER 1→
DSP OFF ←DIALOG ← THEATER 2←

## ■ DSP mode

| | |
|---|---|
| **HALL** | Simulates the acoustic effects of a large concert hall. Suitable for classical music.<br>Long delay time of reflected sounds, coupled with reverberation effects let the listener enjoy the dynamic and beautiful sounds characteristic of concert halls and powerful orchestral performances. |
| **JAZZ** | Simulates the acoustic effects of general jazz clubs with a floor space of around 400m². Reflected sound is virtually below 100 ms, for the listener to enjoy live-band effects. |
| **DANCE** | Simulates the acoustic effects of discos with a square dance floor.<br>Features strong bass sound.<br>Reflected sound delay time is virtually below 50 ms, for the listener to enjoy the "fever" of disco sounds. |
| **THEATER 1** | Sets the delay time of the reflected sound best suited for playing back acoustic parameters of a medium-sized movie theater (with seating capacity of 300) in your living room. (About 30 to 120 msec.) |
| **THEATER 2** | Reproduces theater sound field effects without losing the localization of each channel. Theater effects can be enjoyed without losing Dolby Pro Logic effects when used in combination. |
| **DIALOG** | This mode is effective when watching movie videos. When this mode is selected, sound frequencies characteristic of the human voice are enhanced, making it easier to hear dialog clearly. Even better effects are produced when this mode is used in conjunction with the Dolby Pro Logic mode (when playing movies bearing the DOLBY SURROUND trademark). |

Memo

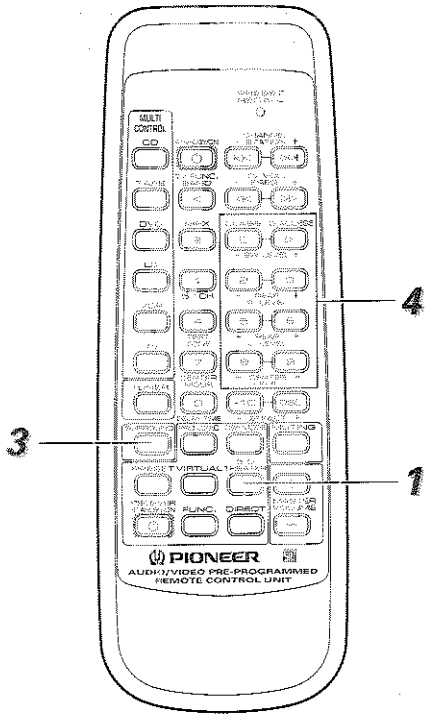
Use of THEATER 1, 2 or DIALOG together with the Dolby Pro Logic Surround will produce better surround effects.

**To enable surround operation, press the SURROUND button after selecting the function.**

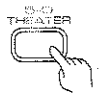
## Turning ON 5-D THEATER

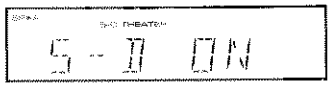
The 5-D THEATER function provides clear dynamic sound effects by outputting audio signals through the surround channel to simulate stereo sound.
Mixing the surround effects with the 5-D THEATER effects will provide sound with depth.

Memo Effects may be less in scenes where sounds do not shift, between L and R channels.




**1. Switch the 5-D THEATER mode.**

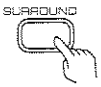


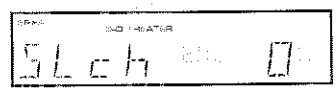

Each time it is pressed, the mode is turned ON/OFF.

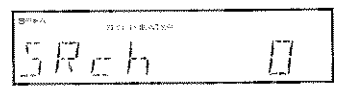
**2. Play back the source.**

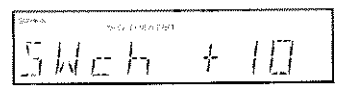
**3. Set the SURROUND operation.**




**4. Adjust the center level, rear L level, rear R level and sub woofer level.**

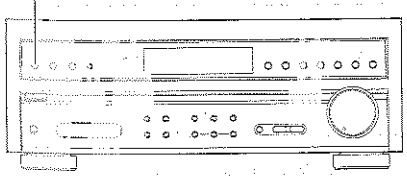







## ■ Operating with the main unit

5-D THEATER



**Press the 5-D THEATER button.**
5-D THEATER is turned ON/OFF each time it is pressed.

Memo

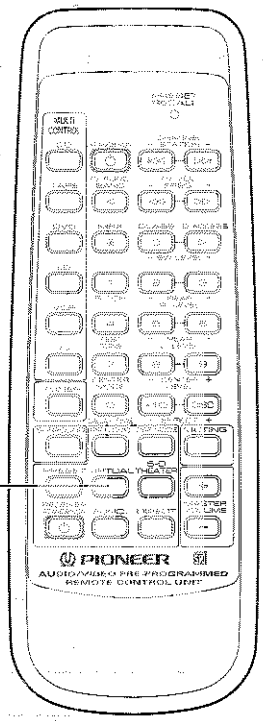
- When 5-D THEATER is selected, the VIRTUAL/SRS, DSP and DIRECT modes are automatically switched off.
- Each channel level settings are memorized for the 5-D THEATER mode.
- When the 5-D THEATER mode is used in conjunction with DOLBY PRO LOGIC, the channel levels employed are those set for the Dolby Pro Logic mode.

**To enable surround operation, press the SURROUND button after selecting the function.**

## Switching the virtual surround mode (Dolby Virtual/SRS*)

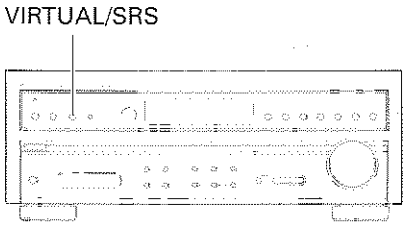
* Registered in the US and selected foreign countries.

These modes provide 3-dimensional sound while using only the two front (L, R) speakers.




**Select the virtual surround.**

VIRTUAL → SRS 1 → SRS 2 → VIRT. OFF →




### ■ Operating with the main unit

**Press the VIRTUAL/SRS button.**
The mode is switched as follow with each press.

VIRTUAL → SRS 1 → SRS 2 → VIRT. OFF →

Memo

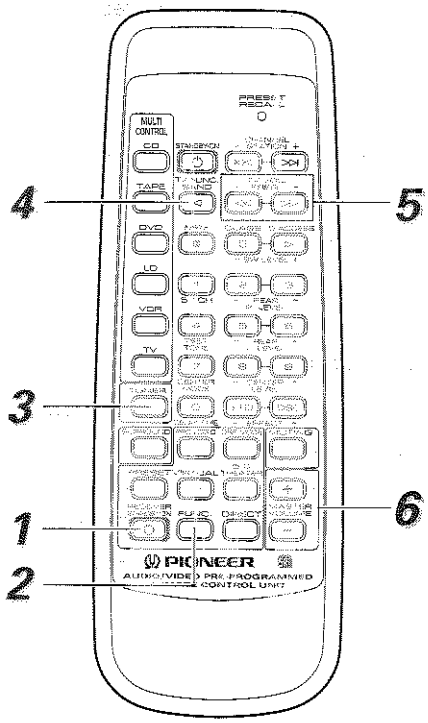
- When VIRTUAL/SRS is selected, the PRO LOGIC, DSP, 5-D THEATER, LOUDNESS and DIRECT modes are automatically switched off.
- TONE CONTROL does not operate when VIRTUAL/SRS is selected.

### ■ DOLBY VIRTUAL/SRS

(TruSurround is a 3D surround technology developed by SRS Labs, Inc. Two speakers are used to expand the sound field.)

| | |
|---|---|
| **DOLBY VIRTUAL** | Allows you to use only two front speakers (L and R) to enjoy sources recorded in Dolby Surround (possessing the DOLBY SURROUND mark). |
| **SRS 1** | Suitable for classical and live music recordings which include the broad frequency ranges of a large auditorium. Recreates the expansive feeling of a concert hall. |
| **SRS 2** | Most suitable for pops and jazz recordings. Recreates the intimate atmosphere of smaller sound sessions. |

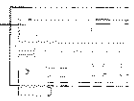
# LISTENING TO FM/AM BROADCASTS




Memo Turn OFF TAPE 2 MONITOR (the Indicator goes off).

**1.** **Turn ON the power of the receiver.**

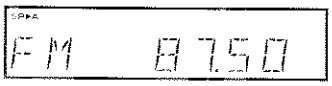
STANDBY indicator goes off.



**2.** **Select the TUNER function.**

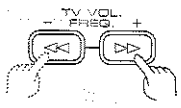
**3.** **Set the TUNER operation**

**4.** **Select the band (FM or AM).**




FM
AM

**5.** **Select the broadcast station.**



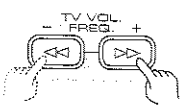
Refer to "Selecting broadcast stations" below.

**6.** **Adjust the volume.**

## Selecting broadcast stations

**(For example, when selecting an FM broadcast)**

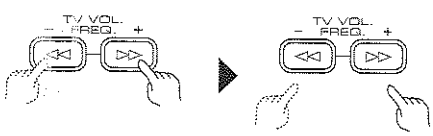
① Selecting step by step



Press lightly and release.

87.50
87.60
87.70
⋮

② Selecting automatically

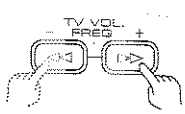


(Press and hold for approx. 1 second, then release)

87.50
↓
89.50

Stops when received.

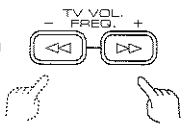
③ Selecting at high speed

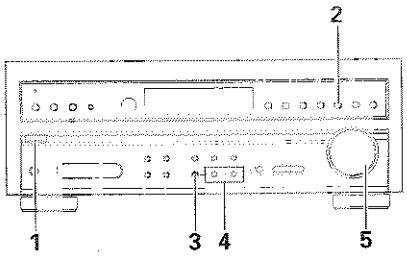


Press continuously.

87.50
87.60
⋮
89.50

Stops when released.






## ■ Selecting a broadcast station using this unit

1. Press the ⏻ (power) STANDBY/ON button to turn the power ON.
2. Press the FM/AM button and select FM or AM broadcast.
3. Press the TUNING SELECT button to set the frequency mode.
4. Press the FREQUENCY – or + button and select the desired broadcast station.
   The TUNED indicator lights up when a broadcast program is received.
5. Adjust the volume.

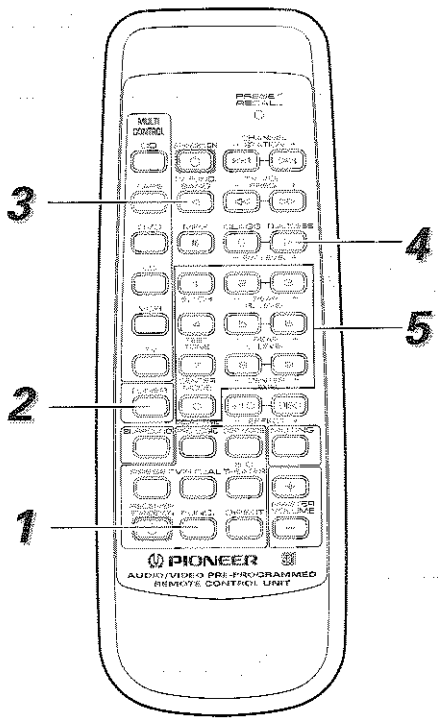
Memo

The TUNED indicator will not light when a broadcast station is too far away or when the broadcasting signal is weak.

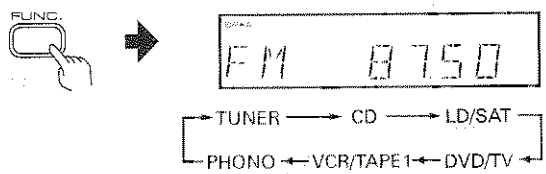
## Directly inputting the frequency [Direct Access (remote control unit only)]

A broadcast station (frequency) can be directly selected using the number buttons on the remote control unit.

Memo Turn OFF the TAPE 2 MONITOR (the indicator goes off).

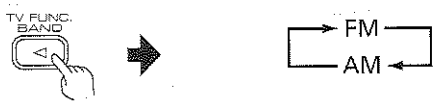



**1. Select the TUNER function.**

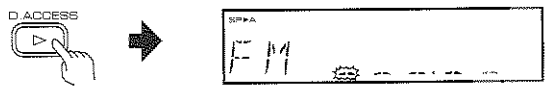



**2. Set the TUNER operation.**

**3. Select the band (FM or AM).**



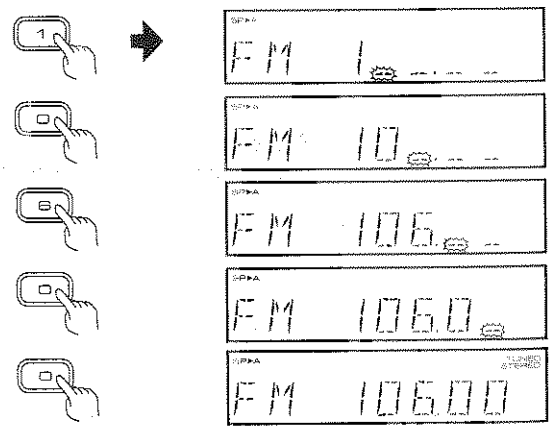

**4. Set the direct access mode.**




**5. Select the broadcast station.**

Press the numbers of the frequency to be received in order.

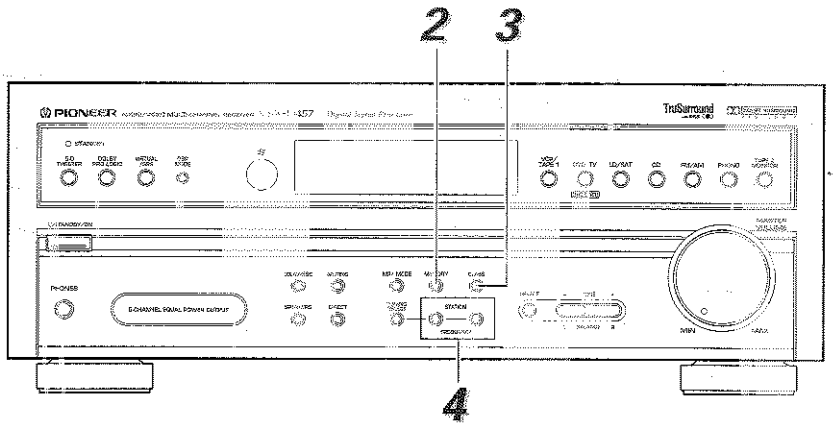
For example, to receive FM 106.00 MHz.




## ■ Canceling the frequency input

The frequency input can be canceled by pressing the D.ACCESS button again. Input the frequency again correctly after pressing the D.ACCESS button again.

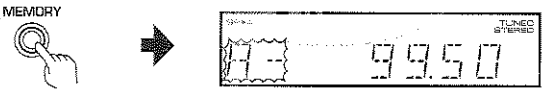
## Memorizing frequently used stations (Main unit only)



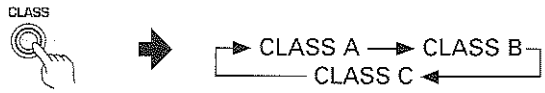

Memo
- The frequency received and MPX MODE (FM only) can be memorized.
- Up to 10 stations (channels 1 - 0) can be memorized in each of three classes (A/B/C).

**1. Receive the desired station.** ➡ Refer to "LISTENING TO FM/AM BROADCASTS" (Pages 21 and 22).

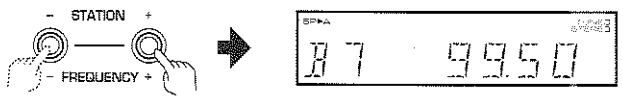
**2. Set the MEMORY mode.**




**3. Select the desired class.**



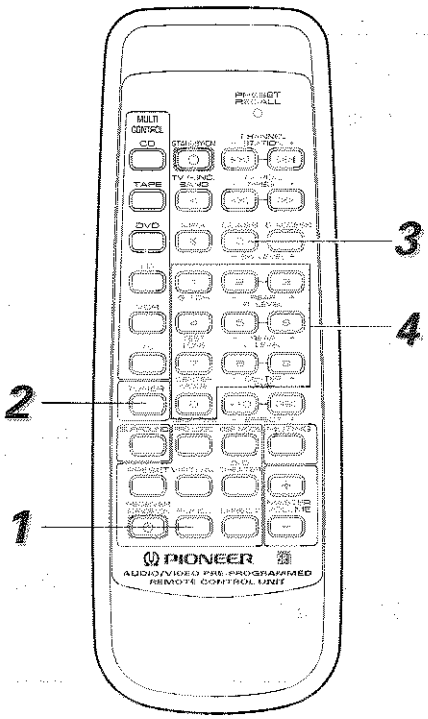

**4. Select the desired station number.**



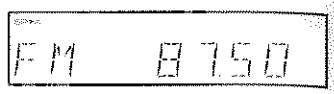

The selection will be automatically memorized in 5 seconds.

Repeat steps 1 to 4 to memorize up to 30 stations.

## Listening to memorized stations



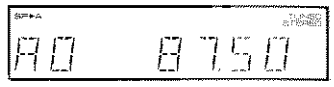

**1.** **Select the TUNER function.**




TUNER → CD → LD/SAT → DVD/TV → VCR/TAPE1 → PHONO → TUNER

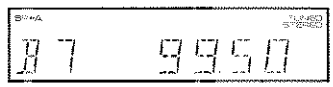
**2.** **Set the TUNER operation.**

**3.** **Select the CLASS in which the desired station is memorized.**




CLASS A → CLASS B → CLASS C →

**4.** **Select the station number of the desired station.**

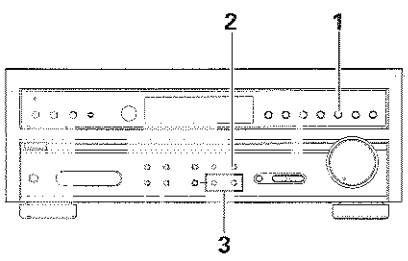



Example:
When FM 99.50 MHz has been memorized in station 7 (7ch) of CLASS B.

Memo

Use the CHANNEL +/– buttons to select other memorized station numbers.

CLASS A (1 ↔ 0 ch) ↔ CLASS B (1 ↔ 0 ch) ↔ CLASS C (1 ↔ 0 ch) ↔




### ■ Operating with the main unit

1. **Press the FM/AM button.**
2. **Press the CLASS button, and select the CLASS (A/B/C) in which the desired station has been memorized.**
3. **Press the STATION – or + button, and select the desired station number which has been memorized.**

Memo

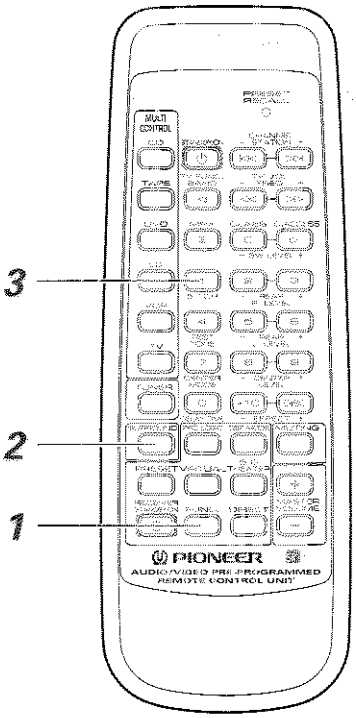
When the power cord of the unit is disconnected from the wall outlet for several days, the stations memorized will be erased.

### ■ Last Station Memory

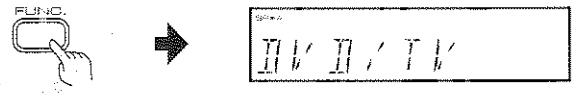
By turning ON the power and setting TUNER, the station set before the power was last turned OFF will be received.

# DVD 5.1-CHANNEL INPUT MODE

Ordinarily, the center, surround (L/R), and sub-woofer channel inputs are digitally processed from the front L/R channels. When this function set to off, the center, surround (L/R), and sub-woofer channel signals are those input to their own respective independent input connectors. This feature allows a Dolby Digital decoder or DVD player provided with 5.1-channel output (built-in Dolby Digital decoder) to be connected to the unit (see page14).
This mode is enabled only when the DVD/TV function is selected.

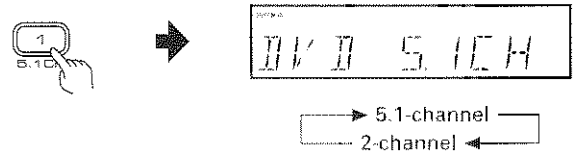



**1.** **Select the DVD/TV function.**




**2.** **Set the SURROUND operation.**

**3.** **Select the input mode.**

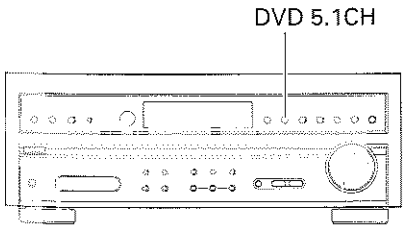



**4.** **Use the test tone to adjust the level of each channel.**
(The steps used are the same as steps 5 to 8 on page 16.)

**5.** **Play back the DVD.**

Memo

The VIRTUAL (SRS), PRO LOGIC, DSP, 5-D THEATER and DIRECT modes do not operate during use of the DVD 5.1-channel mode. When any one of these five buttons is pressed, "DVD 5.1 CH" display flashes as a warning.

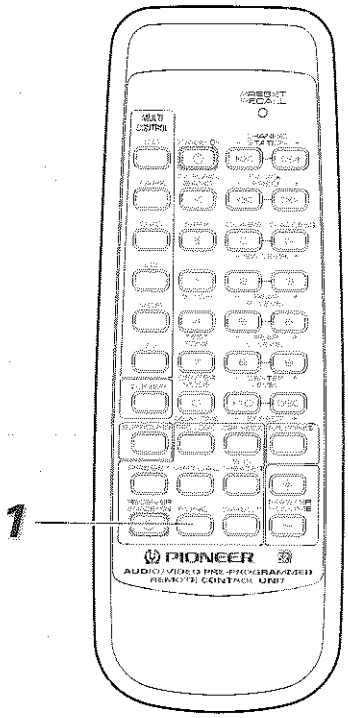



## ■ Operating with the main unit

**Press the DVD 5.1CH button.**
Each time it is pressed, the mode alternates between 5.1-channel and 2-channel.

# RECORDING

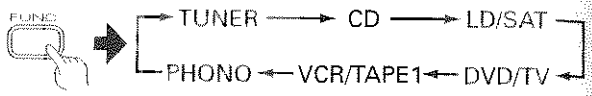
## Recording with TAPE 1 or TAPE 2




Memo

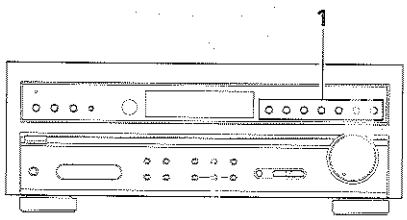
Turn ON the power of all equipment to be used.

**1.** **Select the source to be recorded.**




**2.** **Start recording with TAPE 1 or TAPE 2.**

**3.** **Play back the source to be recorded.**




### ■ Operating with the main unit

1. **Select the source to be recorded using the Function buttons.**
2. **Start recording with TAPE 1 or TAPE 2.**
3. **Play back the source to be recorded.**

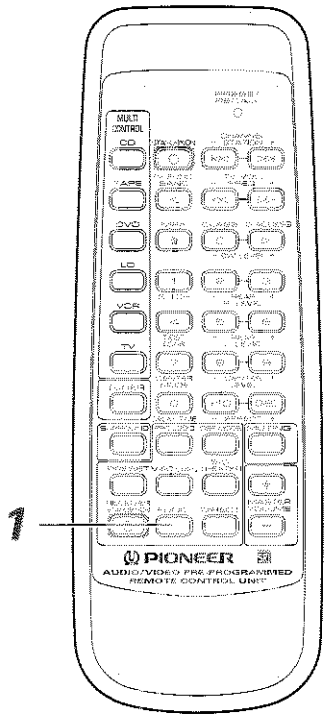
Memo

- The TAPE 2 sounds cannot be recorded.
- The VCR/TAPE 1 sounds cannot be recorded with TAPE 1.
- The volume, tone, balance, and surround settings of this unit have no effect on the recording signal.

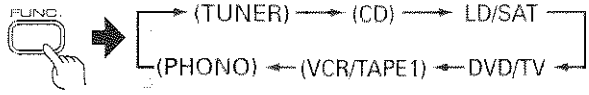
### ■ Recording Monitor

When recording with TAPE 2, if the connected recording device has a recording monitor function, turning ON the TAPE 2 MONITOR button will enable recording to be carried out simultaneously with playback monitoring (the TAPE 2 indicator lights).

## Recording with a VCR

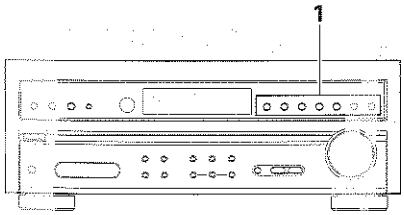



**1** Select the source to be recorded.




**2** Start recording with a VCR.

**3** Play back the source to be recorded.




### ■ Operating with the main unit

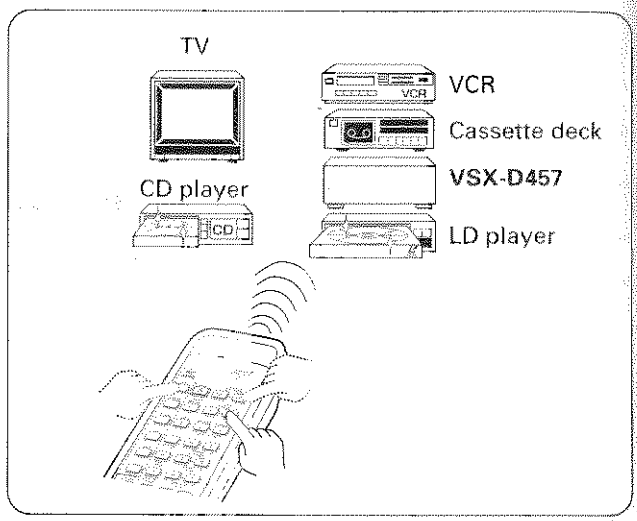
1. Select the source to be recorded using the Function buttons.
2. Start recording with a VCR.
3. Play back the source to be recorded.

Memo

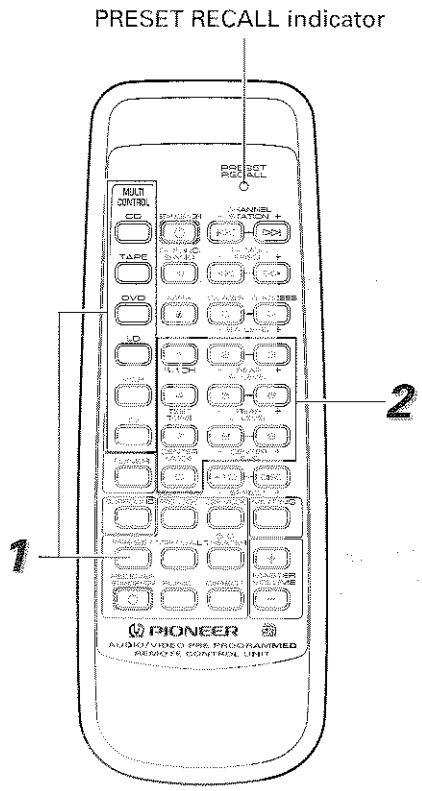
- The signal from VCR/TAPE 1 cannot be recorded.
- The volume, tone, balance, and surround settings of this unit have no effect on the recording signal.

# OPERATING OTHER EQUIPMENT USING THIS UNIT'S REMOTE CONTROL

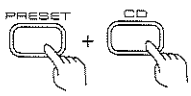
The remote control unit can be used to operate your PIONEER products and other manufacturers' audio/video equipment (VCR, TV, LD player, etc.).
Perform the following procedure to enable operation of other manufacturers' equipment.




## Preset recall set up




**1. Set the preset mode.**

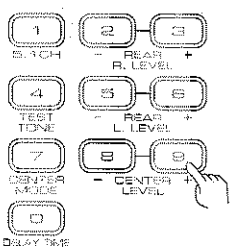



Press together with the PRESET button and any one of MULTI CONTROL function buttons.

➡ The PRESET RECALL indicator lights.

**2. Point the remote control unit towards the device to be operated, and input the three-digit code number.**

* Refer to the LIST OF MANUFACTURER CODES on page 37.



➡ The PRESET RECALL indicator blinks for 2 seconds.

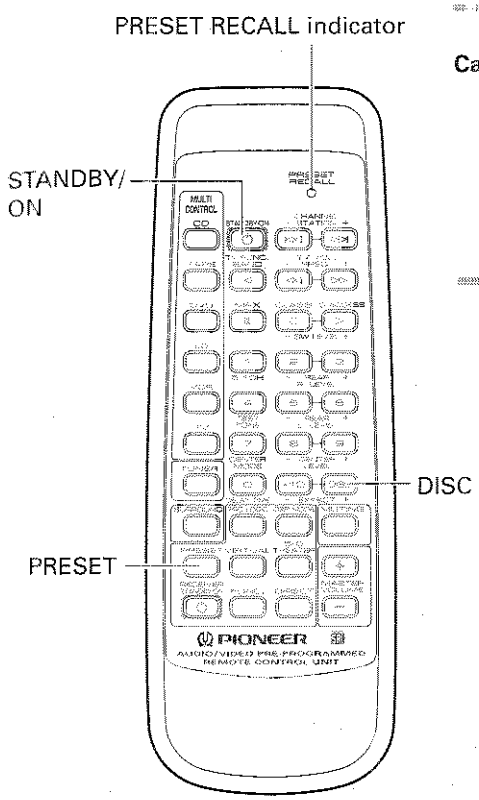
When a three-digit code number is input, the power ON/OFF signal will be output from the remote control unit. If the power of the device turns ON or OFF according to this signal, it indicates that the device has been set properly.
If the power does not turn ON or OFF, input another code.

Memo

- When any button other than number buttons is pressed in the preset mode and when a number button is not pressed for 30 seconds, the preset mode will be canceled.
- The 6 MULTI CONTROL buttons can be used to call all items preset other than the items displayed.
- This remote control unit is able to preserve preset settings without power for short period of times such as during replacement of batteries. (For about 1 minute)

## Canceling preset code settings

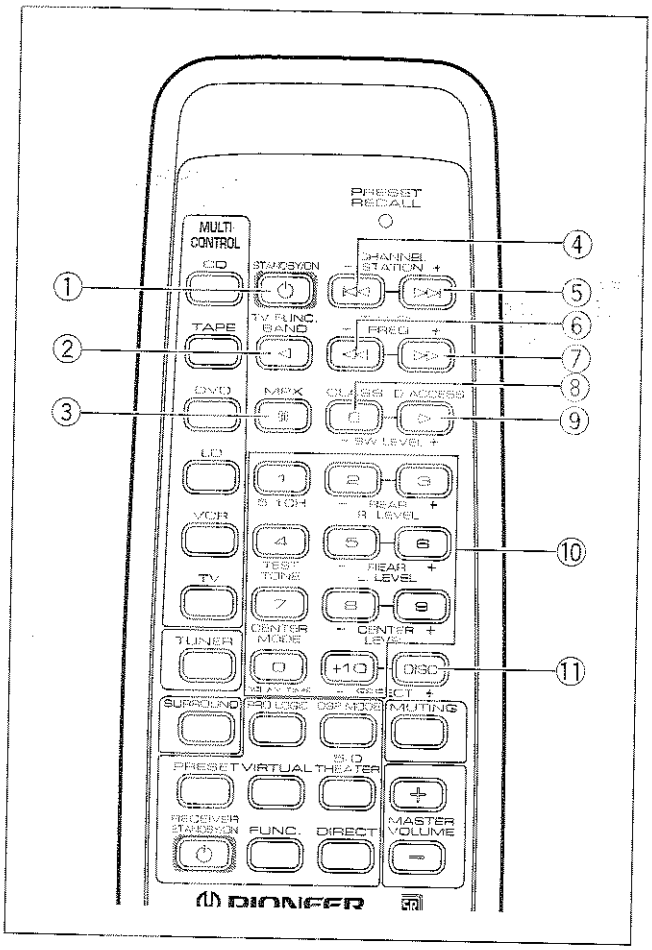
Cancels all preset code settings.




**Cancel the setting.**

Press together with the PRESET button, DISC button and STANDBY/ON button for more than 3 seconds.

The PRESET RECALL indicator will blink. After blinking three times, all settings will be canceled.




## DVD PLAYER operation

**Press any one of buttons in the MULTI CONTROL function area which is input preset codes of DVD, and operate using the following buttons.**

### ① ⏻ (power) STANDBY/ON

Use to turn STANDBY/ON the DVD player.

### ② ◄ (AUDIO)

Use to switch AUDIO. Some models will switch ANGLE.

### ③ ❚❚

Use to pause. (With some players, pressing this button may set still pictures.)

### ④ |◄◄

Pressing and releasing this button immediately returns playback to the beginning of the chapter (track) currently being played. Pressing it continuously returns playback to the beginning of a previous chapter (track).

### ⑤ ►►|

Pressing and releasing this button immediately advances playback to the beginning of the next chapter (track). Pressing it continuously advances playback to the beginning of a future chapter (track).

### ⑥ ◄◄

Continuously pressing this button will set fast reverse playback.

### ⑦ ►►

Pressing this button continuously will start fast forward playback.

### ⑧ ■

Pressing this button during playback will stop the unit.

### ⑨ ►

Starts playback.

### ⑩ Number buttons, +10 button

The functions of these buttons differ according to the model as shown below in two ways.

- Models using as number buttons

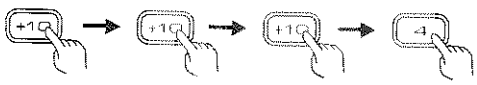
  **1 to 9, 0:**

  Use to select the chapter (track).

  **+10:**

  Use to select chapter (track) numbers higher than 10.

  Example: Chapter (track) 34



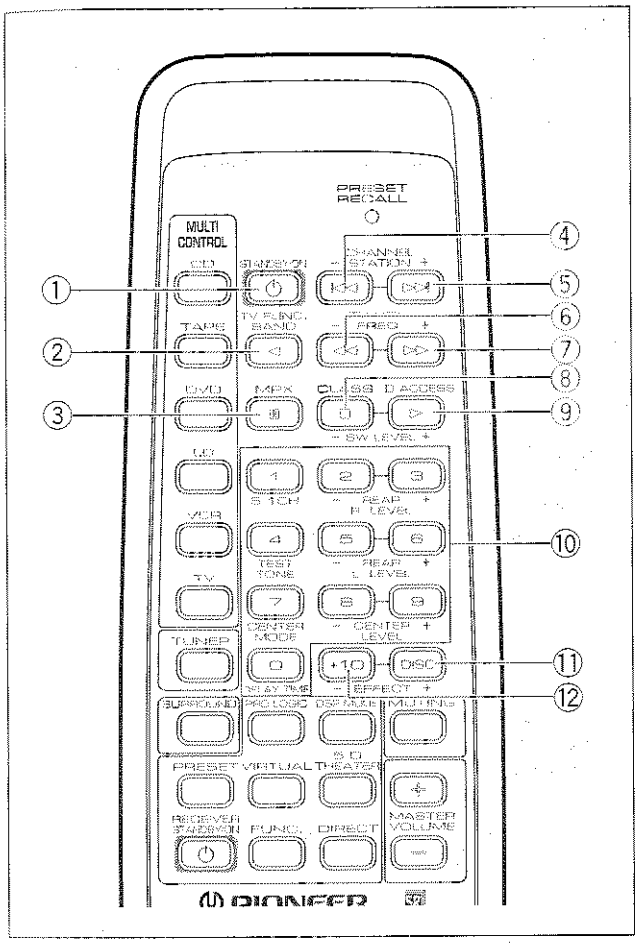

  Some models also use this button as the ENTER (execution) button.

- Some models using as cursor buttons

  **2** : ↑
  **4** : ←
  **5** : ENTER
  **6** : →
  **8** : ↓
  **9** : MENU
  Displays the menus of default settings, adjusting picture quality and etc..
  **0** : RETURN
  Return the previous menus.
  **+10** : TITLE
  Displays the title recorded on the disc.

### ⑪ DISC (MENU)

Displays the menus recorded on the disc.




## LD PLAYER operation

**Press any one of buttons in the MULTI CONTROL function area which is input preset codes of LD, and operate using the following buttons.**

### ① ⏻ (power) STANDBY/ON
Use to turn STANDBY/ON the LD player.

### ③ ⏸
Use to pause. (With some players, pressing this button may set still pictures.)

### ④ ⏮
Pressing and releasing this button immediately returns playback to the beginning of the chapter (track) currently being played. Pressing it continuously returns playback to the beginning of a previous chapter (track).

### ⑤ ⏭
Pressing and releasing this button immediately advances playback to the beginning of the next chapter (track). Pressing it continuously advances playback to the beginning of a future chapter (track).

### ⑥ ◀◀
Continuously pressing this button will set fast reverse playback.

### ⑦ ▶▶
Pressing this button continuously will start fast forward playback.

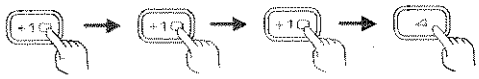
### ⑧ ■
Pressing this button during playback will stop the unit. (With some players, the disc table may come out if pressed during stop.)

### ⑨ ▶
Starts playback.

### ⑩ Number buttons
Use to select the chapter (track).

### ⑪ DISC (SIDE A/B)
Switches between sides A and B of the disc.

### ⑫ +10 button
Use to select the chapter (track) numbers higher than 10.
Example: Chapter (track) 34




## SAT (Satellite Tuner) operation

**Press any one of buttons in the MULTI CONTROL function area which is input preset codes of SAT, and operate using the following buttons.**

### ① ⏻ (SAT POWER) STANDBY/ON
Use to turn STANDBY/ON the power of the satellite broadcast tuner.

### ② ◀ (←), ④ ⏮ (↑), ⑦ ▶▶ (→), ⑧ ■ (↓)
Serve as cursor buttons for obtaining information on programs.

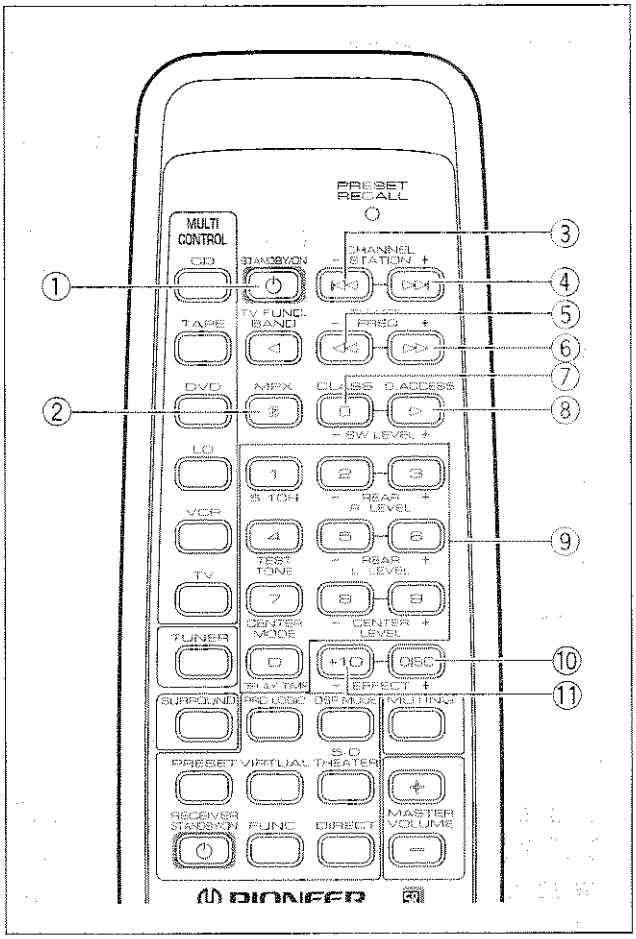
### ⑤ ⏭ (SAT OFF)
Use to turn OFF the power of the satellite broadcast tuner.

### ⑥ ◀◀ (ENTER)
Use to set the selected position of the cursor using the ②, ④, ⑦ and ⑧ buttons.

### ⑨ ▶ (GUIDE)
Use to turn ON/OFF the program information screen.

### ⑩ Number buttons
Use to select satellite broadcast channels.

### ⑪ DISC (MENU)
Use to turn ON/OFF the main menu.




## CD PLAYER/MD PLAYER operation

**Press any one of buttons in the MULTI CONTROL function area which is input preset codes of CD or MD, and operate using the following buttons.**

① **⏻ (power) STANDBY/ON**
Use to turn STANDBY/ON the CD player or MD player.

② **⏸**
Use to pause playback.

③ **⏮**
Pressing and releasing this button immediately returns playback to the beginning of the track currently being played. Pressing it continuously returns playback to the beginning of a previous track.

④ **⏭**
Pressing and releasing this button immediately advances playback to the beginning of the next track. Pressing it continuously advances playback to the beginning of a future track.

⑤ **◀◀**
Continuously pressing this button fast reverses playback.

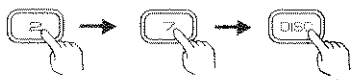
⑥ **▶▶**
Pressing this button continuously fast forwards playback.

⑦ **■**
Stops playback.

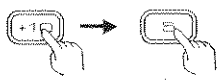
⑧ **▶**
Starts playback.

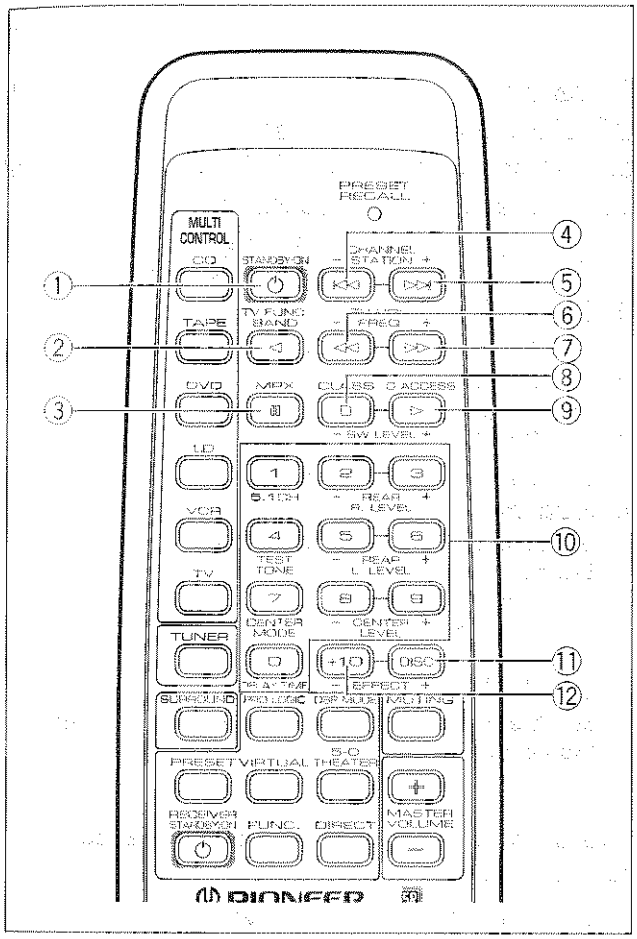
⑨ **Number buttons**
Use to select songs directly.

⑩ **DISC (CD player only)**
Use to select the disc number.
(Some CD players cannot be operated.)
Example:
When selecting track number 27




⑪ **+10 (track) button**
Use to select the track number.
(Some CD players cannot be operated.)
Example:
When selecting track number 15






## CASSETTE DECK/VCR operation

**Press any one of buttons in the MULTI CONTROL function area which is input preset codes of TAPE or VCR, and operate using the following buttons.**

**[Operations common to the cassette deck/VCR]**

① ⏻ **(power) STANDBY/ON**

Use to turn STANDBY/ON the power of the cassette deck and VCR.
(Cannot turn STANDBY/ON some cassette decks.)

③ ⏸

Pauses playback and recording (sets still pictures).

⑥ ◀◀

Rewinds the tape. Pressing this button during playback starts fast rewind playback.

⑦ ▶▶

Fast forwards the tape. Pressing this button during playback starts fast forward playback.

⑧ ■

Stops tape running.

⑨ ▶

Starts playback.

**[Cassette deck only]**

② ◀

Plays in the direction of the arrow.
For double cassette decks, the ⑩ Number buttons, ⑪ DISC button and ⑫ +10 button can be used to operate deck 1 also.
(Some models cannot be operated.)

⑩ [7] **(◀)**

Plays in the direction of the arrow.

[8] **(◀◀)**

Fast rewinds the tape in the direction of the arrow.

[9] **(▶▶)**

Fast forwards the tape in the direction of the arrow.

[0] **(⏸)**

Pauses playback.

⑪ [DISC] **(▶)**

Plays in the direction of the arrow.

⑫ [+10] **(■)**

Stops tape running.

**[VCR only]**

② ◀ **(TV/VCR)**

Use to switch the VCR antenna output to TV or VCR.

④, ⑤ **CHANNEL –, +**

Changes the channels of the TV tuner in the VCR.

⑩ **Number buttons**

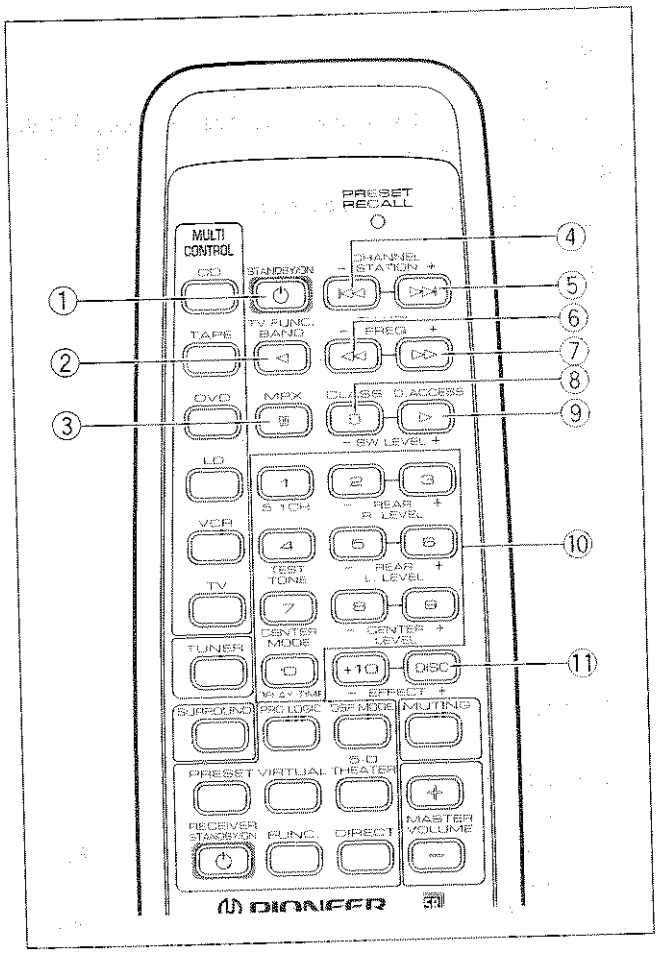
Use for selecting the channels of the TV tuner in the VCR.
(Some models may not require this step.)

⑪ **DISC (CH. ENTER)**

Sets the channels selected using the Number buttons.
(Some models may not require this step.)

⑫ **+10 button**

Use for selecting the channels of the TV tuner in the VCR.
(Some models may not require this step.)
Example: Channel 25




## TV/CATV operation

**Press any one of buttons in the MULTI CONTROL function area which is input preset codes of TV or CATV, and operate using the following buttons.**

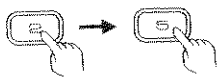
① ⏻ **(power) STANDBY/ON**
Use to turn STANDBY/ON the TV or CATV.

② **TV FUNC. (TV only)**
Use to select the TV input.

④, ⑤ **CHANNEL –, +**
Use to select a TV broadcast channel.

⑥, ⑦ **TV VOL –, +**
Use to adjust the TV volume.

⑩ **Number buttons**
Use to select TV broadcast channels.
Example: When selecting channel 25



⑪ **DISC (CH. ENTER)**
Sets the channels selected using the Number buttons. (Some models may not require this operation.)

**The functions of these buttons differ according to the model as shown below:**

① ⏻ **(power) STANDBY/ON**

② ◀ **(←),** ④ ⏮ **(↑),** ⑦ ▶▶ **(→),** ⑧ ■ **(↓)**
Serve as cursor buttons for obtaining information on programs.

③ ⏸ **(VOL. –),** ⑨ ▶ **(VOL. +)**

⑤ ⏭ **(TV FUNC.)**

⑥ ◀◀ **(ENTER)**
Use to set the selected position of the cursor using the ②, ④, ⑦ and ⑧ buttons.

⑩ **Number buttons**

⑪ **DISC (MENU)**
Use to turn ON/OFF the menu screen.

## TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

| Symptom | Cause | Remedy |
|---|---|---|
| The power does not turn ON. | • The power plug is disconnected from the outlet.<br>• The cause may lie in the protection circuit. | • Insert into the wall outlet.<br>• Disconnect the power plug from the outlet, and insert again. |
| The unit does not work even when the buttons are pressed. | • Due to effects of static electricity when the air is dry. | • Disconnect the power plug from the outlet, and insert again. |
| No sound is output when a function is set. | • Not properly connected.<br>• Sound is muted.<br>• The volume is turned down.<br>• The TAPE 2 MONITOR is ON.<br>• The speaker switch is OFF.<br>• The SPEAKERS button has been used to selected speakers A and B (SP►AB), even though only one set of speakers is connected. | • Refer to pages 12 to 14 and connect again.<br>• Press the MUTING button on the remote control unit.<br>• Adjust MASTER VOLUME.<br>• Press the TAPE 2 MONITOR button.<br>• Press the SPEAKERS button to select the speakers.<br>• Set the SPEAKERS button to match the set of speakers connected (A or B). |
| No image is output when a function is set. | • Not properly connected.<br>• The input source is not properly selected. | • Refer to pages 12 to 14, and connect again.<br>• Press the correct button. |
| Considerable noise in radio broadcasts. | • Not received at proper frequency.<br>• The antenna is not connected. | • Receive the correct frequency.<br>• Connect the antenna properly. (P. 12 and 13) |
| | [FM broadcast reception]<br>• The FM antenna is not stretched out, and faces an inappropriate direction.<br>• Weak radio waves. | • Stretch out the antenna and secure it to a wall while selecting the direction and position with the best reception state.<br>• Change the FM antenna to an outdoor antenna of multiple elements. (P. 12) |
| | [AM broadcast reception]<br>• The AM antenna faces inappropriate direction.<br>• Weak radio waves.<br>• Affected by other equipment. (Fluorescent lamp, motor, etc.) | • Select the direction and position with the best reception state.<br>• Connect a 5 to 6 meter long vinyl-coated wire to AM antenna terminal and extend the wire outdoors, if possible. (P. 12)<br>• Turn off the equipment which cause noise or move them away from the unit.<br>• Distance the antenna from the equipment which cause noise. |
| Broadcast stations cannot be selected automatically. | • Weak radio waves. | • Change the FM antenna to an outdoor antenna of multiple elements. (P. 12) |

| Symptom | Cause | Remedy |
|---|---|---|
| No sound from surround or center speaker. | • Settings are incorrect.<br>• Surround or Center level is turned down.<br>• The SURROUND or CENTER speaker is disconnected. | • Refer to pages 14 to 20 and 25.<br>• Raise the level.<br>• Connect. (P. 12, 13 and 14) |
| Cannot be remote controlled. | • The remote control unit batteries have worn out.<br>• Too great of a distance. Bad angle.<br>• There is an obstacle blocking signals in between.<br>• Strong light such as fluorescent light is shining onto the remote sensor of the main unit. | • Replace the batteries. (P. 7)<br>• Operate within 7 m and 30 degrees from the left and right of the main unit's remote sensor.<br>• Remove the obstacle or operate from somewhere else.<br>• Avoid direct exposure of the remote sensor to the light. |

If the unit does not operate normally due to external effects such as static electricity, disconnect the power plug from the outlet and insert again to return to the normal operating conditions.

# LIST OF MANUFACTURER CODES

| Device | Manufacturer | Manufacturer Code |
|---|---|---|
| DVD | TOSHIBA | 001,007 |
| | SONY | 002,008 |
| | PANASONIC | 003,009 |
| | JVC | 004,010 |
| | SAMSUNG | 005,011 |
| | PIONEER | 000,006 |
| LD | SONY | 101 |
| | PANASONIC | 105,106 |
| | KENWOOD | 103 |
| | PHILIPS | 104 |
| | MITSUBISHI | 100 |
| | RCA | 107 |
| | PIONEER | 100 |
| SAT | RCA | 201,203 |
| | SONY | 202 |
| | PIONEER | 200 |
| CD | SONY | 301,316,317,318 |
| | TECHNICS | 304,326 |
| | KENWOOD | 310,321,311 |
| | DENON | 309 |
| | RCA | 302,319,313 |
| | PHILIPS | 312,322 |
| | YAMAHA | 315,314,328 |
| | JVC | 303 |
| | TEAC | 305,306,327,324,325 |
| | ONKYO | 320,308,307 |
| | MARANTZ | 323,312,324 |
| | SANYO | 313 |
| | OPTIMUS | 300 |
| | PIONEER | 300 |
| VCR | RCA | 401,406,408,414,405,413,411<br>415 |
| | ZENITH | 403,404,417 |
| | MAGNAVOX | 414,408,426,403 |
| | FISHER | 410,426,412,427,425,420 |
| | PANASONIC | 408,432,433 |
| | TOSHIBA | 405,409,426 |
| | JVC | 428,430,429,408,414,431,407 |
| | HITACHI | 408,401,406,436,434 |
| | SONY | 416,417,404,408 |
| | MITSUBISHI | 409,420,421,422,423,424,408<br>407 |
| | SANYO | 410,412,425,435 |
| | SHARP | 402,418,419 |
| | GOLDSTAR | 411,409 |
| | OPTIMUS | 408,432,433,402,418,419 |
| | PIONEER | 400 |

| Device | Manufacturer | Manufacturer Code |
|---|---|---|
| TV | RCA | 601,610,615,616,617,618 |
| | ZENITH | 603,620 |
| | MAGNAVOX | 607,610,603,612,629 |
| | GE | 601,608,607,610,617,602,628,611<br>618 |
| | PANASONIC | 608,622,607 |
| | SONY | 604 |
| | TOSHIBA | 605,602,626,621 |
| | MITSUBISHI | 609,610,602,621 |
| | HITACHI | 606,610,624,625,618 |
| | JVC | 613,623 |
| | SHARP | 602,619,627 |
| | SANYO | 621,614 |
| | PHILIPS | 607 |
| | GOLDSTAR | 610,623,621,602 |
| | RADIO SHACK | 610,623,621,602 |
| | PIONEER | 600,635 |
| CATV | JERROLD | 711,701,702,712,704,713,703<br>714,716,715 |
| | S.A. | 705,706,708,709 |
| | ZENITH | 707,717,710 |
| | PIONEER | 700 |
| TAPE | SONY | 801,806 |
| | TECHNICS | 803 |
| | KENWOOD | 804,807 |
| | TEAC | 805 |
| | DENON | 810 |
| | ONKYO | 809,808 |
| | YAMAHA | 811,812,816 |
| | JVC | 802,815 |
| | FISHER | 813 |
| | OPTIMUS | 800 |
| | PIONEER | 800,814 |
| MD | SONY | 901 |
| | KENWOOD | 903 |
| | SHARP | 902 |
| | DENON | 904 |
| | PIONEER | 900 |

The DVD codes at the left correspond to the number button while those at the right correspond to the cursor button.
(See page 30)

# SPECIFICATIONS

## Amplifier section

Continuous Power Output (DIN)
- Front ..... 110 W + 110 W (1 kHz, 1 %, 8 Ω)

Continuous Power Output
- Front ..... 100 W + 100 W (1 kHz, 0.8 %, 8 Ω)
- Center ..... 100 W (1 kHz, 0.8 %, 8 Ω)
- Rear ..... 100 W + 100 W (1 kHz, 0.8 %, 8 Ω)

Input (Sensitivity/Impedance)
- PHONO MM ..... 2.8 mV/47 kΩ
- LD/SAT, CD, VCR/TAPE 1, TAPE 2
- DVD/TV ..... 200 mV/47 kΩ

Phono Overload level (T.H.D. 0.1 %, 1kHz)
- PHONO MM ..... 100 mV

Frequency Response
- PHONO MM ..... 20 Hz to 20,000 Hz ± 0.3 dB
- LD/SAT, CD, VCR/TAPE 1, TAPE 2
- DVD/TV ..... 5 Hz to 100,000 Hz $^{+0}_{-3}$ dB

Output (Level/Impedance)
- VCR/TAPE 1 REC, TAPE 2 REC ..... 200 mV/2.2 kΩ

Tone Control
- BASS ..... ± 8 dB (100 Hz)
- TREBLE ..... ± 8 dB (10 kHz)
- LOUDNESS ..... + 7 dB/+ 6 dB (100 Hz/10 kHz)

Signal-to-Noise Ratio (IHF, short circuited, A network)
- PHONO MM ..... 72 dB
- LD/SAT, CD, VCR/TAPE 1, TAPE 2, DVD/TV ..... 96 dB

Signal-to Noise Ratio [EIA, at 1 W (1 kHz)]
- PHONO MM ..... 75 dB
- LD/SAT, CD, VCR/TAPE 1, TAPE 2, DVD/TV ..... 79 dB

## VIDEO Section

Input (Sensitivity/Impedance)
- VCR, DVD/TV, LD/SAT ..... 1 Vp-p/75 Ω

Output (Level/Impedance)
- VCR REC, MONITOR TV ..... 1 Vp-p/75 Ω

Frequency Response
- LD/SAT, VCR, DVD/TV
- → MONITOR ..... 5 Hz to 7 MHz $^{+0}_{-3}$ dB

Signal-to-Noise Ratio ..... 55 dB

Cross Talk ..... 55 dB

## FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono:13.2 dBf, IHF (1.3 μV/75 Ω)
50 dB Quieting Sensitivity ..... Mono: 20.2 dBf
Stereo: 38.6 dBf
Signal-to-Noise Ratio ..... Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Distortion ..... Stereo: 0.5 % (1 kHz)
Alternate Channel Selectivity ..... 60 dB (400 kHz)
Stereo Separation ..... 40 dB (1 kHz)
Frequency Response ..... 30 Hz to 15 kHz (±1) dB
Antenna Input ..... 75 Ω unbalanced

## AM Tuner Section

Frequency Range ..... 531 kHz to 1,602 kHz (9 kHz step)
530 kHz to 1,700 kHz (10 kHz step)
Sensitivity (IHF, Loop antenna) ..... 350 μV/m
Selectivity ..... 25 dB
Signal-to-Noise Ratio ..... 50 dB
Antenna ..... Loop antenna

## Miscellaneous

Power Requirements ..... AC 110 V/120-127 V/220V/240V (Switchable), 50/60 Hz
Power Consumption ..... 280 W
In Standby Condition ..... 2.5 W
AC Outlet
SWITCHED ..... 100 W MAX
Dimensions ..... 420 (W) × 158 (H) × 374 (D) mm
Weight (without package) ..... 9.1 kg

## Furnished Parts

FM Antenna ..... 1
AM Loop Antenna ..... 1
Dry Cell Batteries [size "AA" (IEC R6P)] ..... 2
Remote Control Unit ..... 1
Operating Instructions ..... 1

***NOTE:***

*Specifications and the design are subject to possible modifications without notice, due to improvements.*

## MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays or other chemicals on or near this unit, since these will corrode surfaces.

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